North Staffordshire Local Transport Plan 2006-2011

Strategic Environmental Assessment

Environmental Report

March 2006

Jointly produced by Stoke-on-Trent City Council and Staffordshire County Council

Planning, Policy and Development
Regeneration and Heritage

PO Box 2461, Civic Centre, Glebe Street,
Stoke-on-Trent. ST4 1WR

Telephone: 01782 232635
Minicom: 01782 232331
Fax: 01782 232235
e-mail: ltp@stoke.gov.uk

www.stoke.gov.uk/ltp

Transport and Planning Policy
Development Services Directorate

Riverway, Stafford, Staffordshire. ST16 3TJ

Telephone: 01785 276735
Minicom: 01785 854034
Fax: 01785 276621
e-mail: transport.policy@staffordshire.gov.uk

www.staffordshire.gov.uk/ltp

ਜੇ ਕਰ ਤੁਸੀਂ ਇਹ ਕਿਤਾਬਚਾ ਨਹੀਂ ਪੜ੍ਹ ਸਕਦੇ ਤਾਂ ਸਾਨੂੰ ਦੱਸੋ
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Glossary

Abbreviation	Definition
AMR	Annual Monitoring Report
AQMA	Air Quality Management Area
BAP	Biodiversity Action Plan
BVPI	Best Value Performance Indicator
CO_2	Carbon Dioxide (greenhouse gas)
DfT	Department for Transport
ESA	Environmentally Sensitive Area
GHG	GreenHouse Gases
HAZ	Health Action Zone
LDF	Local Development Framework
LNR	Local Nature Reserve
LTP	Local Transport Plan
NATA	New Approach to Transport Appraisal
NNR	National Nature Reserve
NO_2; NO_x	Nitrogen dioxide; oxides of nitrogen (air pollution)
NSITS	North Staffordshire Integrated Transport Study
ODPM	Office of the Deputy Prime Minister
PM_{10}	Fine Particulate Matter (air pollution)
SAC	Special Area of Conservation
SAM	Scheduled Ancient Monument
SUDS	Sustainable Urban Drainage Systems
SUMIT	System for Urban Management and Information Transmission
RSDF	Regional Sustainable Development Framework
RoWIP	Rights of Way Improvement Plan
RSS	Regional Spatial Strategy
RTS	Regional Transport Strategy
SCC	Staffordshire County Council
SEA	Strategic Environment Assessment
SSSI	Site of Special Scientific Interest
TAMP	Transport Asset Management Plan

Requirements of the Directive	Where Covered
Preparation of an environmental report in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme, are identified, described and evaluated. The information to be given is:	
a) An outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes	*Sections 2 and 3*
b) The relevant aspects of the current state of the environment and the likely evolution without implementation of the plan or programme	*Sections 5 and 6 and Appendices A and B*
c) The environmental characteristics of areas likely to be significantly affected	*Sections 5 and 6 and Appendices A and B*
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directive 79/409/EEC and 92/43/EEC	*Sections 5 and 6 and Appendices A and B*
e) The environmental protection objectives established at international, community or national level which are relevant to the programme and the way those objectives and any environmental considerations have been taken into account during its preparation	*Sections 2, 3 and 6*
f) The likely significant effects on the environment, including: short, medium and long term; permanent and temporary; positive and negative; secondary, cumulative and synergistic effects on issues such as: biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.	*Section 8*
g) The measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse effects on the environment of implementing the plan or programme.	*Section 9*
h) An outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	*Sections 7, 8 and Appendix A*
i) A description of measures envisaged concerning monitoring (in accordance with regulation 17)	*Section 10*
j) A non-technical summary of the information provided under the above headings	*Non-technical summary*
Consultation with:	
Authorities with environmental responsibility when deciding on the scope and level of detail of the information to be included in the environment report	*Sections 1, 3, 4, and 6 and Appendix A*
Authorities with environmental responsibility and the public to be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan and accompanying environmental report before its adoption	*Sections 1 and 3*
Other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country	*Sections 1 and 3*

Requirements of the Directive	Where Covered
Taking the environmental report and the results of the consultations into account in decision making	
Provision of information on the decision: When the plan or programme is adopted the public and any countries consulted must be informed and the following made available: • The plan or programme as adopted • A statement summarising how environmental considerations have been integrated into the plan or programme in accordance with the requirements of the legislation The measures decided concerning monitoring	*Incorporated into the LTP*
Monitoring of the environmental effects of the plan or programmes implementation must be undertaken	*Section 10, and incorporated into the LTP*

NON-TECHNICAL SUMMARY

INTRODUCTION

1. The Strategic Environmental Assessment (SEA) of the North Staffordshire Local Transport Plan (LTP) was carried out by officers from Staffordshire County Council and Stoke-on-Trent City Council. It has helped to shape the North Staffordshire LTP, by ensuring that the environment is at the heart of the transport planning process.

2. This is the first LTP for the North Staffordshire urban area. It takes forward the existing LTPs for Staffordshire and Stoke-on-Trent and takes into account the North Staffordshire Integrated Transport Study. The LTP sets out the strategies, targets and spending programmes for transport for the five years from 2006/07 to 2010/11.

3. The priorities of the LTP are:
    - Support for regeneration efforts and the local economy
    - Improving accessibility for all
    - Tackling congestion
    - Better air quality
    - Improved travel safety and reduced fear of crime
    - Cost effective maintenance and management of the transport system
    - An enhanced quality of life

METHODOLOGY

4. In order to focus on the issues raised by the implementation of the LTP, a scoping exercise was carried out to establish the current state of the local environment. This highlighted the existing problems in the area and identified environmental objectives of existing plans and programmes.

5. A framework of SEA objectives was developed within this context. These are:

    1. **To maintain and improve local air quality**
    2. **To improve the quality of ground and surface waters**
    3. **To respond to climate change through reduced greenhouse gas emissions**
    4. **To conserve and enhance wildlife habitats and species**
    5. **To encourage better use of land and conserve soil resources and quality**
    6. **To conserve and enhance the natural historic environment and landscape quality**
    7. **To protect and enhance buildings, features and areas ofhistoric, archaeological or cultural value and their settings**
    8. **To reduce road traffic and congestion**
    9. **To promote more sustainable modes of transport**
    10. **To promote health and reduce health inequalities**
    11. **To promote safe communities, reduce crime and the fear of crime**
    12. **To improve access to jobs and services**
    13. **To support regeneration of deprived areas**
    14. **To support sustainable economic growth**

6. The LTP objectives were compared with these SEA objectives to identify any conflict. The effects of transport alternatives and strategy options were also assessed against the SEA objectives.

7. Further detailed assessment against the environmental objectives was completed for the effect of each of the plan components, compared with the likely state of the environment in the short (5 years) and long term (15 years) without the LTP. The plan as a whole was assessed for effects that are not direct or the result of a combination of effects.

8. Mitigation has been recommended for possible negative effects that were identified, and also to enhance positive effects and areas where the plan currently has little positive effect. A monitoring programme for these effects has been proposed.

RECOMMENDATIONS

9. Due to the nature of the majority of the proposals contained in the LTP, no large adverse effects on the environment have been identified, and few slight adverse. The assessment of the plan as a whole, for cumulative, synergistic and indirect effects, has indicated that large beneficial effects to the SEA objectives are likely to be addressed more fully as the effects of plan implementation become apparent over time. Also the plan as a whole produces larger benefits to the SEA objectives than the individual components. However, the Full North Staffordshire LTP has needed to more fully address the issues associated with the following SEA objectives than the Provisional so that large rather than just slight beneficial effects can be achieved:
    - To maintain and improve local air quality
    - To respond to climate change through reduced greenhouse gas emissions;
    - To conserve and enhance the natural historic environment and landscape quality
    - To protect and enhance buildings, features and areas of historic, archaeological or cultural value, and their settings

10. The slight adverse effects identified can be minimised to a satisfactory degree through Environmental Impact Assessments that are required for significant scheme proposals, the mitigation measures identified. These should identify and mitigate negative effects, whilst enhancing positive effects.

11. The mitigation measures fall into two broad categories – the first concerns the need to ensure that standard mitigation measures, as set out in national guidance/standards, are implemented as a matter of course. Such measures include adoption of standard policy approaches, for example consult conservation officers throughout the development of schemes from initial design through to implementation. The second concerns measures that are 'bespoke' in nature, seeking to target specific concerns or policy priorities in the North Staffordshire area. Such measures could include the following:
    - the promotion of alternative fuels, particularly in public transport vehicles;
    - the incorporation of micro-energy generation in transport proposals;
    - the development of design guidelines for the use of sustainable/recycled materials in transport proposals; and
    - adoption of specific design guidelines for transport infrastructure and signage in historically sensitive environments.

MONITORING

12. In order to examine the plan's performance against environmental objectives and to allow remedial action, a framework is suggested which will monitor the SEA objectives. The programme includes LTP indicators, Best Value Performance Indicators, together with indicators from external agencies such as the Environment Agency and Countryside Quality Counts project. The suggested framework puts forward a number of new indicators relating to the impact of transport schemes on sites of historical interest and biodiversity.

13. The monitoring programme will be reviewed as improved information and indicators become available.

1. INTRODUCTION

BACKGROUND

1.1 A Local Transport Plan (LTP) has been prepared for North Staffordshire which will describe policies, strategies, programmes, major schemes and measures aimed at addressing local transport issues to 2011. The North Staffordshire LTP, produced jointly by Stoke on Trent City Council and Staffordshire County Council, will address the four shared priorities for transport as agreed in 2002 by the Government and the Local Government Association, which are:

Congestion;

Accessibility;

Road Safety; and

Air Quality.

1.2 Whilst fulfilling the above priorities, Local Authorities must also endeavour to improve the quality of life of local people where possible.

1.3 Supporting the regeneration efforts of North Staffordshire is an overarching priority for the North Staffordshire LTP.

1.4 This Environmental Report presents the outcome of the Strategic Environmental Assessment (SEA) process that has been undertaken alongside preparation of the North Staffordshire LTP.

REQUIREMENT FOR STRATEGIC ENVIRONMENTAL ASSESSMENT

1.5 The EU Directive 2001/42/EC on assessment of effects of certain plans and programmes on the environment (the 'SEA Directive') came into force in the UK on 20 July 2004 through the Environmental Assessment of Plans and Programmes Regulations 2004. The LTPs of UK local authorities are covered by this legislation.

1.6 The objective of the SEA Directive is:

'*To provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans… with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans… which are likely to have significant effects on the environment.'* (Article 1)

1.7 SEA is an iterative review process that plans and programmes must undergo as they are being developed to ensure that significant environmental effects arising are identified, assessed, mitigated and communicated to decision-makers. The Environmental Report is the fundamental output of the SEA process. SEA also requires the monitoring of significant effects once the plan is implemented.

1.8 New Approach to Appraisal (NATA), the transport appraisal framework of the Department for Transport (DfT), partially covers many of the requirements of the SEA Directive. The Directive introduces the following main areas of additional work:

- Collecting baseline environmental information and identifying environmental problems;
- Predicting the significant effects of the plan;
- Identifying mitigation;
- Identifying alternatives and their effects;
- Consulting the public and authorities with environmental responsibilities;
- Reporting how the results of the SEA and consultation responses have been taken into account;
- Providing a non-technical summary of the SEA;
- Monitoring the actual environmental effects of the plan during its implementation.

SCOPE OF EFFECTS TO BE ASSESSED

1.9 The SEA Directive and the SEA Regulations state that the SEA should consider the likely significant effects of the plan on the following issues:

- Biodiversity
- Flora and fauna
- Air
- Cultural heritage
- Population
- Soil
- Climatic factors
- Landscape
- Human health
- Water
- Material assets
- Interrelationships

1.10 With the exception of the last item, these twelve ‘issues’ essentially represent a categorisation of the range of effects to be considered, and henceforth are referred to below as ‘SEA topics’. It should be noted that three of them (population, human health and material assets) relate to humans. Furthermore, ‘landscape’ often comprises a complex mix of natural and man-made aspects. The last topic, the full description of which in the Directive and Regulations is “the interrelationships between the above factors”, is especially important in exploring the “secondary, cumulative and synergistic” effects.

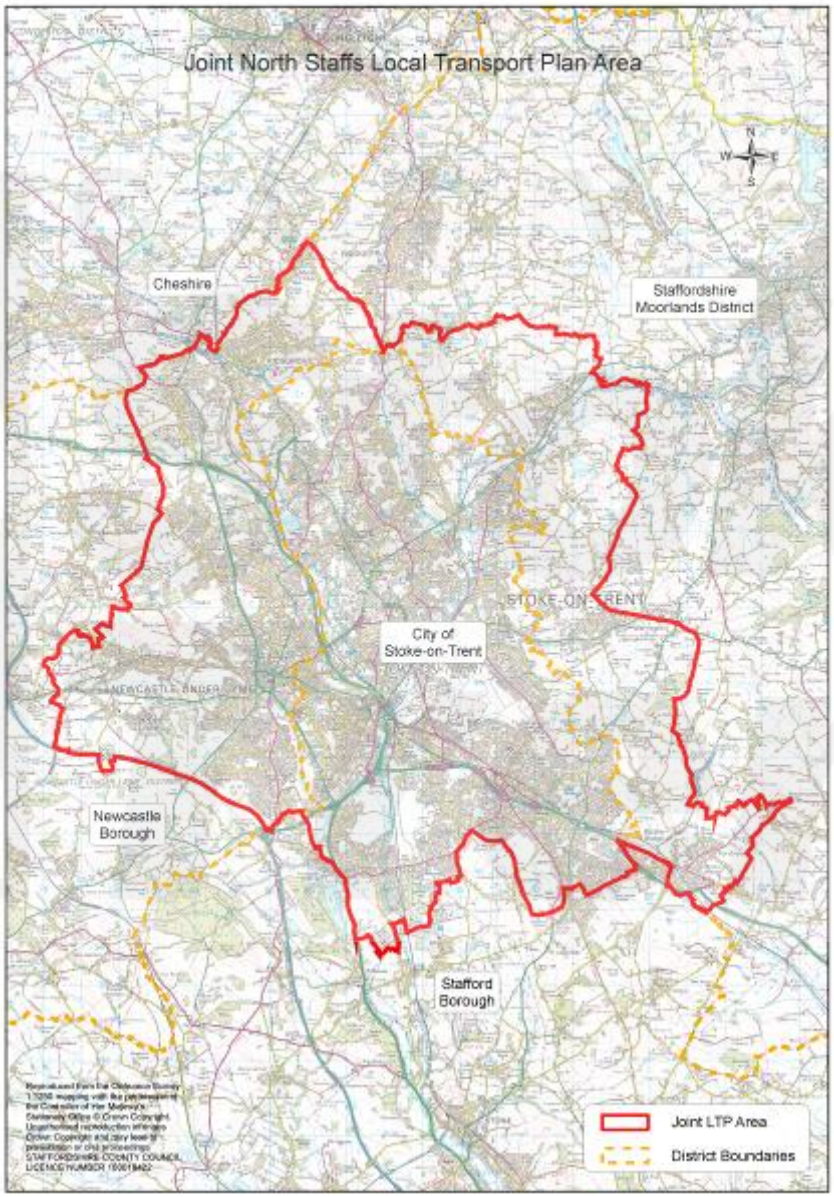
TIME PERIOD

1.11 Formally, the SEA covers the same time period that the North Staffordshire LTP covers. This is 2006 to 2011. However, the Directive requires assessment of “long term”, “secondary, cumulative and synergistic” effects. This entails consideration of time scales that, in some cases, may extend well beyond the period of the North Staffordshire LTP. “Long term” in the context of assessment of environmental and sustainability effects is generally understood to mean at least 15 - 20 years and the DfT guidance for second LTPs also emphasises that they should be part of a long term strategy.

GEOGRAPHICAL AREA

1.12 This SEA is an assessment of transport policies and strategies of the North Staffordshire LTP. The plan covers the North Staffordshire Conurbation, which includes the City of Stoke on Trent, the urban parts of Newcastle Borough Council and the fringes of the conurbation within Staffordshire Moorlands District Council (Fig. 1.1).

Figure 1.1 North Staffordshire Joint LTP Area



STRATEGIC ENVIRONMENTAL ASSESSMENT PROCESS AND STAGES COMPLETED

1.13 The DfT published guidance in December 2004 on how to carry out SEA for transport plans and programmes in England in accordance with the Directive. In addition, The Practical Guide to the Strategic Environmental Assessment Directive by the ODPM, the Scottish Executive, the Welsh Assembly Government and the Northern Ireland Department of the Environment, published in September 2005, provides guidance on how to comply with the Directive in an environmental assessment of a plan or programme.

1.14 The main stages in the SEA process, as described in DfT's guidance, are as follows:

Stage A – identifying other relevant plans and programmes and environmental protection objectives, establishing the environmental baseline, identifying environmental problems and deciding SEA objectives;
Stage B – deciding on the scope of the SEA, developing alternatives to plan proposals and consulting with environmental bodies;
Stage C – assessing the effects of the draft North Staffordshire LTP, identifying measures to reduce or counteract the negative effects, devise monitoring programme and prepare Environmental Report;
Stage D – consultation on the Environmental Report as part of LTP consultation;
Stage E – monitoring the significant effects of implementing the North Staffordshire LTP on the environment.

The North Staffordshire LTP SEA Scoping Report

1.15 A Scoping Report was prepared as the basis for the consultation with statutory consultation bodies on the scope and level of detail that must be included in this Environmental Report.

1.16 The Scoping Report described work undertaken in Stages A and B of the SEA process and set out:

- The North Staffordshire LTP aims;
- Environmental objectives of other relevant plans and programmes;
- Baseline information and trend analysis;
- Key environmental issues identified;
- The SEA Framework, including the suggested SEA objectives, indicators and targets;
- Strategic assessment of plan alternatives; and
- Remaining stages of the SEA and their methodology.

The North Staffordshire LTP SEA Environmental Report for Consultation

1.17 The requirement to produce an Environmental Report arises directly from Article 5.1 of the SEA Directive which states that:

'An Environmental Report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated.'

1.18 The Environmental Report presents Stages A and B of the SEA process from the Scoping Report as set out above following consultation, and completes Stage C.

NORTH STAFFORDSHIRE LTP SEA CONSULTATION

1.19 The SEA Directive creates specific requirements for consultation. The public and authorities with environmental responsibility should be given an early and effective opportunity to express their opinion on the draft plan or programme and the Environmental Report.

1.20 The SEA consultation process has been carried out as follows:

- SEA Scoping Consultation: November/December 2005/January 2006
- Consultation on the Environmental Report: January/February/March 2006

1.21 The Publication of the final North Staffordshire LTP and this Environmental Report at the end of March 2006 has been informed by this consultation programme.

2. THE NORTH STAFFORDSHIRE LTP

OVERVIEW OF THE PROVISIONAL NORTH STAFFORDSHIRE LTP

2.1 North Staffordshire is a microcosm of the West Midlands. At its heart is the North Staffordshire Conurbation home to over 360,000 people and 145,000 jobs. The LTP covers the City of Stoke on Trent, the urban parts of Newcastle Borough Council and the fringes of the conurbation within Staffordshire Moorlands District Council. It has an excellent strategic location being at the edge of both the West Midlands and the North West Regions.

2.2 The conurbation has grown up from the merging of many industrial and pre-industrial communities. Its multi-centred or poly-centric structure means that it lacks a single major generator or destination for movement.

2.3 North Staffordshire is a green conurbation. Most places are no more than a few minutes away from open countryside. The area has access to a wide range of facilities including two universities, two theatres of renown, two professional football clubs and many other activities.

2.4 The LTP area crosses many boundaries including local authorities and regeneration drivers. The LTP supports local Community Strategies and links to the land use planning process being brought forward through Local Development Frameworks. The LTP also takes account of the following programmes and strategies:

- North Staffordshire Integrated Economic Development Strategy (NSIEDS).
- North Staffordshire Integrated Transport Strategy (NSITS)
- North Staffordshire Core Spatial Strategy (NSCSS)
- North Staffordshire Retail Study (NSRS)
- North Staffordshire Housing Market Renewal Pathfinder (Renew)
- North Staffordshire Regeneration Zone (RZ)

2.5 The North Staffordshire Integrated Transport Study provides a robust evidence base for the LTP and recommends a long term transport strategy following NATA that has been informed by an extensive consultation programme. The study found that increased dependency on the car is resulting in traffic congestion, road accidents, traffic noise and air pollution. The public transport system is also in decline which causes accessibility problems for people travelling to jobs and services.

2.6 The DfT guidance for the second round of LTPs identifies four priorities for local transport planning and an overall consideration for quality of life. These priorities are closely aligned to the issues highlighted through the NSITS study. They are described briefly below with a note regarding their context for this assessment.

Congestion

2.7 Local Authorities are expected to consider how best to manage their road networks to make the most efficient use of existing resources. Measures to deal with congestion are at the heart of the Government's transport strategy. Together with the new network management duty on local authorities imposed by the Traffic Management Act 2004, the measures used to tackle congestion aim to deliver freer flowing local roads and associated economic and quality of life benefits. Congestion might not be the key issue for every authority but without effective action, nationally, the trend would remain upwards.

2.8 A new congestion target reflecting the local targets that local authorities develop for their LTP2s was announced in July 2005. These will only be made available in future annual and autumn performance reports. In the meantime the national target from the Ten Year Plan is to reduce congestion to 2000 levels by 2010.

2.9 In keeping with national trends, road traffic in North Staffordshire has shown a steady increase over past decades. Congestion occurs mostly in peak periods on weekdays, and as a consequence of incidents and roadworks on the Trunk and Local Road networks.

Accessibility

2.10 Access to places of work, education, health care, shopping, leisure, exercise and other opportunities can significantly impact people's quality of life and their life chances. The measures used to improve accessibility aim to encourage participation and retention in education, reduce inequalities in health, and help people move from welfare into work.

2.11 Accessibility is a key component of the DfT's Public Service Agreement target "to secure improvements to the accessibility, punctuality and reliability of local public transport (bus and light rail), with an increase in use of more than 12% by 2010 compared with 2000 levels". Improved accessibility will make a valuable contribution to national objectives and targets in other sectors from improving health to attendance and attainment in education.

2.12 Local authorities have a crucial role to play in improving access to jobs and key services, particularly for people from disadvantaged groups and areas. Authorities can achieve this through partnership working and the planning, delivery and management of local public transport, the highway infrastructure and cycle and footway networks.

Road Safety

2.13 Road accidents cause immense human suffering. Every year, around 3,500 people are killed on Britain's roads and 40,000 are seriously injured. In total, there are over 300,000 road casualties, in nearly 240,000 accidents, and about fifteen times that number of non-injury incidents. This represents a serious economic burden; the direct cost of road accidents involving deaths or injuries is thought to be in the region of £3 billion a year. In North Staffordshire casualty trends show a significant decline however, in spite of this reduction, there were still over 1,800 people either injured or killed on roads during 2004.

2.14 Targets for casualty reduction are set in the national Road Safety Strategy, 'Tomorrow's Roads – Safer for Everyone'. It sets 2010 targets for casualty reductions, compared to the 1994-98 average of people and children killed or seriously injured (50% and 40% reduction respectively) and in the number of slight casualties (10% reduction).

2.15 These national targets are designed to inform the local strategies and targets that will reflect the local situation. The national guidance also indicates that the significantly higher incidences of casualties in disadvantaged areas also need to be tackled.

2.16 Local authorities are expected to devise a road safety strategy as part of their local transport strategy and to identify the most important road safety issues of their area in their second LTPs. These issues should also take into account the following: disadvantaged communities, child road safety, urban and rural areas, speed management, road safety at work and mitigating risks to motorcyclists.

Air Quality

2.17 Air pollution can have serious effects on people's health, increasing hospital admissions and contributing to premature death. The Air Quality Strategy for England, Scotland, Wales and Northern Ireland sets health based objectives for nine air pollutants and two for the protection of ecosystems. Local Authorities have a duty to assess air quality in their areas and where it is found that the objectives are unlikely to be met by the due date, they must declare Air Quality Management Areas (AQMAs) and prepare action plans setting out proposals to tackle the problems.

2.18 Road transport is the dominant source of air pollution in urban areas, accounting for over half of the total emissions of nitrogen oxides (NO_X) and fine particles (PM10). Over 120 local authorities have designated AQMAs, the majority of which (95%) are primarily transport related. Where transport is the primary factor for an objective not being met, local authorities should integrate their air quality action plans into their second LTPs.

Quality of Life Issues

2.19 The LTP can help to improve the quality of life in North Staffordshire through working jointly with partners to help achieve the following:

- Reduced transport related greenhouse gases and local pollution
- Reduced traffic noise
- Improved health through more walking and cycling
- Reduced traffic accidents
- Improved access to services and facilities
- Improved quality of public open spaces
- Conserved or enhanced landscape quality
- High quality urban street environment

Climate Change

2.20 Stoke on Trent City Council and Staffordshire County Council will play their part in reducing greenhouse gases as both authorities fully endorse the Government's objectives. The authorities believe that the most effective way to reduce transport induced CO_2 and other greenhouse gas emissions are:

- Reducing overall traffic growth and congestion through the work of the congestion strategy
- Encouraging modal change to non-motorised transport through the work of the Accessibility Strategy
- Encouraging the use of bus and train and car sharing to maximise travel efficiency i.e. to reduce the ratio of persons travelled per unit of CO_2

Noise Pollution

2.21 To alleviate noise pollution from traffic the main actions are:

- Using noise reduction materials where appropriate in highway maintenance works
- Managing the movement of lorries so encourage them to use only suitable routes
- Close working with Environmental Health Officers in monitoring noise levels across North Staffordshire

Community Health

2.22 Results from the Health Inequalities Profile for North Staffordshire produced by the Director for Public Health in 2003 show that the health of the population of the North Staffordshire Health Action Zone (HAZ) is among the worst nationally.

2.23 The LTP contains many areas of action that will benefit the health of local people. These include:

- Providing an alternative means of travel to the car which involves some physical activity. This includes promoting and providing the facilities for walking and cycling
- Providing information on the cycle, walking and bus networks so that people know how to use these to make journeys
- Working in partnership with health authorities on travel plans and access to healthcare facilities

Landscape and Biodiversity

2.24 Stoke on Trent City Council and Staffordshire County Council will ensure that wherever possible:

- The landscape quality is maintained and enhanced during the implementation of highway schemes

- The opportunity for animals to cross busy roads are preserved or provided for

- That the methods and materials used to maintain roads, cut grass verges and hedges are designed to enhance biodiversity

Streetscape Quality

2.25 Local authorities can help achieve this key priority through proper design and maintenance of streets and highways, traffic management measures, encouragement of walking, riding and cycling, and sympathetic use and maintenance of street furniture, trees and greenery, lighting and signage.

PROVISIONAL NORTH STAFFORDSHIRE LTP AIMS AND INDICATORS

2.26 The aims of the Provisional North Staffordshire Local Transport Plan reflect national, regional and local regeneration and transportation priorities. The aims are:

A. Improved **accessibility** for all
B. Tackling traffic **congestion**
C. Improved travel **safety** and reduced **fear of crime**
D. Better **air quality**
E. Support for **regeneration** efforts and the local **economy**
F. Cost effective **maintenance and management** of the transport system
G. An enhanced **quality of life**

2.27 The Provisional North Staffordshire LTP has been prepared in accordance with the five transport priorities of the Regional Spatial Strategy (RSS), which are as follows:

- promote a change of hearts and minds of the Region's populations;
- make best use of the existing regional transport network;
- provide a comprehensive public transport system that serves the urban areas;
- improve access to Birmingham International Airport and the National Exhibition Centre; and
- ensure that the West Midlands is a reliable hub to serve international, national and regional connections.

2.28 There are mandatory performance indicators that should be used to measure progress against the objectives of second LTPs. In addition, the DfT guidance indicates that local authorities should set their own intermediate indicators to measure progress where the mandatory ones would not provide sufficient focus. These are developed as part of the constituent strategies of the North Staffordshire LTP, and are summarised in Table 2.1 below.

Table 2.1 - Possible North Staffordshire LTP Performance Indicators

Code	Name
Mandatory Indicators	
M1 - BVPI 223	Principal road condition
M2 - BVPI 224a	Non-principal road condition
M3 - BVPI 224b	Unclassified road condition
M4 - BVPI 99a(i)	Total killed or seriously injured (KSI) casualties
M5 - BVPI 99b(i)	Child killed or seriously injured (KSI) casualties
M6 - BVPI 99c(i)	Total slight casualties
M7 - BVPI 102	Public transport patronage
M8 - BVPI 104	Satisfaction with local bus services
M9 - BVPI 187	Footway condition
M10 - LTP1	Accessibility
M11 - LTP2	Change in area wide road traffic mileage
M12 - LTP3	Cycling trips
M13 - LTP4	Mode share of journeys to school
M14 - LTP5	Bus punctuality
M15 - LTP6	Changes in peak period traffic flows to urban centres
M16 - LTP7	Congestion monitoring (average vehicle delay)
M17 - LTP8	Air quality target
Proposed Supporting Outcome Indicators	
L1	Access to bus stops
L2	Traffic levels
L3	Bus modal share
Proposed Contributory Output Indicators	
L4	Rights of way
L5	Temporary traffic controls
L6	Bus stop information
L7	Long distance travel
L8	School travel plans
L9	Workplace travel plans coverage
L10	Reduce the level of dangerous defects
L11	Satisfaction for Public Transport Information

3. OTHER RELEVANT PLANS AND PROGRAMMES

INTRODUCTION

3.1 The Directive states that the Environmental Report should provide information on:

The plan's *"relationship with other relevant plans and programmes"* and *"the environmental protection objectives, established at international, [European] Community or national level, which are relevant to the plan... and the way those objectives and any environmental considerations have been taken into account during its preparation*" (Annex 1 (a), (e))

3.2 Relevant international, national, regional and local plans and programmes that might influence the North Staffordshire LTP have been identified and are outlined in Table 3.1. This includes existing development plans and other plans and policies prepared by SCC and its constituent local authorities and in the West Midlands region. Additionally, other plans and policies were identified following the ODPM and DfT guidance, which lists plans and programmes that are likely to be relevant.

Table 3.1 - Relevant Strategies, Plans and Programmes

Plan / programme	Source
International Plans and Programmes	
European Directives	Conservation of Natural Habitats and of Wild Flora and Fauna (92/43/EEC), Noise Directive (86/188/EEC), Conservation of Wild Birds Directive (79/409/EEC), Freshwater Fisheries Directive (78/659/EEC), Urban Wastewater Treatment Directive (91/271/EEC), Hazardous Waste Directive (91/689/EEC), Water Framework Directive (2000/60/EC), Air Quality Directive (96/62/EC) and their daughter directives.
EU 6th Environmental Action Plan, September 2002	www.europa.eu.int
EU Biodiversity Action Plan, February 1998	www.europa.eu.int
EU Sustainable Development Strategy, May 2001	www.europa.eu.int
Kyoto Protocol to the UN Framework Convention on Climate Change	www.unfccc.int
National Plans and Programmes	
A New Deal for Transport White Paper	DfT
The Future of Transport White Paper	www.dft.gov.uk
Guidance on Full Local Transport Plans, March 2000	www.dft.gov.uk
Full Guidance on Local Transport Plans, Second Edition, December 2004	www.dft.gov.uk
Strategic Environmental Assessment Guidance for Transport Plans and Programmes TAG Unit 2.11, December 2004	www.webtag.org.uk
SD Policy Statement by Dept of Transport	www.dft.gov.uk
Transport 10 year plan	www.dft.gov.uk
Road Traffic Reduction Act 1997	www.hmso.gov.uk
Road Traffic Reduction (National Targets) Act 1998	www.hmso.gov.uk
UK Sustainable Development Strategy	http://www.sustainable-development.gov.uk
UK Air Quality Strategy 2000	www.airquality.co.uk
PPS1: General Policies and Plans, PPG2: Greenbelt, PPG3: Housing, PPG4: Industrial, Commercial	ODPM

Development and Small Firms, PPS6: Planning for Town Centres, PPG7: Countryside, PPG8: Telecommunications, PPS 9: Biodiversity and Geological Conservation, PPS10: Planning for Sustainable Waste Management, PPS11: Regional Spatial Planning, PPG13: Transport, PPG15: Planning and Historic Environment, PPG16: Archaeology and Planning, PPG17: Planning for Sport, Open Space and Recreation, PPG 21: Tourism, PPG22: Renewable Energy, PPS23: Planning and Pollution Control, PPG24: Planning and Noise, PPG25: Planning and the Floodplain, PPS1: Delivering Sustainable Communities, PPS7: Sustainable Development in Rural Areas, Draft PPS9: Biodiversity and Geological Conservation, PPS12: Local Development Frameworks, PPS22: Renewable Energy	
Environment Agency plans and strategies	www.environment-agency.gov.uk
English Nature plans and strategies	www.english-nature.gov.uk
Countryside Agency plans and strategies	www.countryside-agency.gov.uk
The Historic Environment: A Force for our Future' (Department for Culture, Media and Sport, 2001)	www.culture.gov.uk
Transport and the Historic Environment	www.english-heritage.gov.uk
National Waste Strategy 2000	www.defra.gov.uk
Wildlife and Countryside Act 1981	www.defra.gov.uk
Countryside and Rights of Way Act 2000	www.hmso.gov.uk
National Biodiversity Action Plan (UK Biodiversity Action Plan Steering Group 1994)	www.ukbap.org.uk
UK Climate Change Programme	www.defra.gov.uk
National Waste Development Framework	www.defra.gov.uk
Accessible Natural Greenspace Standards, English Nature	www.englishnature.gov.uk
The Air Quality Strategy for England, Scotland, Wales and Northern Ireland – Working Together for Clean Air	www.defra.gov.uk
Countryside Quality Counts Phase 3 Final Report 2005	http://www.countryside-quality-counts.org.uk/res_005.htm
Regional Plans and Programmes	
Regional Spatial Strategy for the West Midlands, June 2004 (formerly known as RPG 11), Incorporates Regional Transport Strategy	www.gowm.gov.uk
A Sustainable Future for the West Midlands - A Regional Sustainable Development Framework, Version One, January 2005	www.wmra.gov.uk
Regional Housing Strategy July 2003	www.wmra.gov.uk
Draft Regional Housing Strategy 2005	www.wmra.gov.uk
West Midlands State of the Environment Report 2001	www.environment-agency.gov.uk
Water Quality in the Midlands, 2003	www.environment-agency.gov.uk
Heritage Counts: State of the West Midlands Historic Environment' (2005)	www.heritagecounts.org.uk
Cultural Life in the West Midlands: Regional Cultural Strategy 2001-2006	www.westmidlandslife.org.uk
West Midlands Regional Energy Strategy, Nov 2004	www.wmra.gov.uk
West Midlands Biodiversity Action Plan	www.ukbap.org.uk
The state of the countryside in the West Midlands 2004 (Countryside Agency)	www.countryside.gov.uk
Delivering Advantage – The West Midlands Economic Strategy (WMES) 2004-2010	www.advantagewm.co.uk
West Midlands Area Multi-Modal Study (Birmingham and Black Country)	www.fta.co.uk

Stoke on Trent and Staffordshire County Council Plans and Programmes	
North Staffordshire Integrated Transport Study (NSITS)	www.stoke.gov.uk
Local Transport Plan 2000 and Annual Progress Reports	www.stoke.gov.uk www.staffordshire.gov.uk
Renew North Staffordshire North Staffordshire Housing Market Assessment Economic Futures for North Staffordshire AMI Heritage Characterisation Studies	www.renewnorthstaffs.gov.uk
Shaping the Future of Staffordshire (Community Strategy)	www.staffordshire.gov.uk
Staffordshire And Stoke- On- Trent Structure Plan 1996-2011	www.staffordshire.gov.uk
Stoke on Trent Community Strategy	www.stoke.gov.uk
North Staffordshire Core Spatial Strategy	www.stoke.gov.uk
Staffordshire and Stoke-on-Trent Waste Local Plan 1998 to 2011	www.stoke.gov.uk www.staffordshire.gov.uk
Staffordshire Waste Local Plan 1998-2011 Sustainability Appraisal	www.staffordshire.gov.uk
Staffordshire and Stoke-on-Trent Minerals Local Plan (1994 - 2006)	www.stoke.gov.uk www.staffordshire.gov.uk
North Staffordshire Retail Study (NSRS)	www,stoke.gov.uk
North Staffordshire Integrated Economic Strategy	www.stoke.gov.uk
Stoke on Trent City Plan 2001	www.stoke.gov.uk
Stoke-on-Trent Local Development Scheme January 2006	www.stoke.gov.uk/ldf
Staffordshire Biodiversity Action Plan	www.sbap.org.uk
Staffordshire Services Community Safety Team Report	www.staffordshire.gov.uk
Staffordshire Quality of Life Report	www.staffordshire.gov.uk
Annual Progress Report for Staffordshire 2005	www.staffordshire.gov.uk
Annual Progress Report for Stoke on Trent 2005	www.stoke.gov.uk
Best Value Performance, Policing and Efficiency Plan 05/06 Staffordshire Police Authority	www.staffordshire.gov.uk
SCC's Climate Change Strategy -Stormy Weather, a draft for internal consultation	SCC staff
Stoke on Trent: Corporate Plan - Performance Plan 2005-2008	www.stoke.gov.uk
Making Staffordshire a Great Place to Live, Work, Visit and Invest – SCC Corporate Strategy	www.staffordshire.gov.uk
Stoke on Trent Environmental Policy	www.stoke.gov.uk
Staffordshire County Council Supplementary Planning Guidance 'planning for Landscape Change'	www.staffordshire.gov.uk
District or Borough Plans and Programmes	
Staffordshire Moorlands Local Plan	www.staffsmoorlands.gov.uk
Staffordshire Moorlands Local Development Framework Statement of Community Involvements	www.staffsmoorlands.gov.uk
Staffordshire Moorlands Local Development Framework Biddulph Town Centre Area Action Plan	www.staffsmoorlands.gov.uk
Staffordshire Moorlands Local Development Framework Cornhill Leek Action Area Plan	www.staffsmoorlands.gov.uk
Staffordshire Moorlands LA21	http://www.staffsmoorlands.gov.uk/ moorlandsla21.members.beeb.net
Staffordshire Moorlands Community Strategy	www.staffsmoorlands.gov.uk
Newcastle under Lyme Local Plan 2011 – Adopted October 2003	www.newcastle-staffs.gov.uk/
Newcastle under Lyme Community Strategy	www.newcastle-staffs.gov.uk/
Newcastle under Lyme Local Agenda 21	www.newcastle-staffs.gov.uk/
Newcastle under Lyme Local Development Scheme – April 2005	www.newcastle-staffs.gov.uk/

SEA THEMES

3.3 Objectives contained within the plans and programmes (detailed in Table 3.1) that are considered to be of relevance to the SEA topics (as set out in the SEA Directive and Regulations and outlined in 0 above) have been used to inform the formulation of a set of 'environmental/sustainability themes'.

3.4 These environmental/sustainability themes, detailed in Table 3.2 below, form the starting point for the development of the SEA objectives, and effectively form a preliminary set of potential 'candidate' SEA objectives. Table 3.2 sets out the derivation of each theme in terms of relevant plans and programmes listed in Table 3.1, and the wording used for each theme in the table reflects that found in the source document(s). Table 3.2 acts as an important aid in transparency for the reader by setting out the first stage in the development of the SEA objectives. It should be noted that each draft theme is cross-referenced to relevant SEA Topics (from the SEA Directive and Regulations) as well as the DfT's well-established NATA[1] Sub-objectives. Again, this is intended to aid transparency by indicating the relevance of each theme to the SEA of the North Staffordshire LTP. Although most themes will have some relevance, some will be more relevant than others in terms of where the North Staffordshire LTP may be expected to influence outcomes. The last column of Table 3.2 provides a cross reference to the related SEA objective(s) developed for this SEA and listed in Table 4.1.

[1] New Approach to Transport Appraisal. For more information on NATA see www.webtag.gov.uk

Table 3.2 - Environmental/Sustainability Themes and their Derivation

Environmental / Sustainability Theme	Source			Relevance to Assessment		
	National/International	Regional	Local	SEA Topics	NATA Sub-objectives	SEA Objective[2]
To improve the health and social care of the residents	Directive 96/62/EC, EU 6th Environmental Action Plan, Government's Transport Sustainable Development Objectives, PPG13, PPG17, Environment Agency, New Deal for Transport	Regional Spatial Strategy for the West Midlands (RSS), Regional Sustainable Development Framework V1 The state of the countryside in the West Midlands 2004	Draft Sustainable Staffordshire Strategy, Staffordshire Waste Local Plan, Structure Plan, Stoke-on-Trent Community Strategy 2004-2014	Population, Human Health	Physical Fitness	1, 2, 3, 8, **10**, 11,12, 13
To improve safety for all travellers, reduce crime, disorder and the fear of crime	Full Guidance on Local Transport Plans, Second Edition, December 2004	RSS, Regional Sustainable Development Framework V1	Stoke-on-Trent and Staffordshire LTPs 2000, Shaping the Future of Staffordshire (Community Strategy), Stoke-on-Trent Community Strategy 2004-2014, North Staffordshire Integrated Transport Study	Population, Human Health	Physical Fitness, Accidents, Security	8, 10, **11**, 12, 13
To revitalise the image of North Staffordshire, enhance it's voice and profile within the region as well as nationally and internationally		RSS, Regional Sustainable Development Framework V1	Shaping the Future of Staffordshire (Community Strategy), Stoke-on-Trent Community Strategy 2004-2014, Structure Plan, North Staffordshire Retail Study, North Staffordshire Integrated Economic Strategy	Population, Human Health	Townscape, Community Severance, Public accounts, Consumer Users	**7**, 13
Increase the prosperity of North Staffordshire and reduce unemployment levels		Regional Spatial Strategy for the West Midlands, Regional Sustainable Development Framework V1	Structure Plan, Shaping the Future of Staffordshire (Community Strategy), Stoke-on-Trent Community Strategy 2004-2014, North Staffordshire Integrated Economic Strategy	Population, Human Health	Townscape, Community Severance, Public accounts, Consumer Users	12, 13, **14**
To maintain and enhance the quality of the natural environment	EU Biodiversity Action Plan, February 1998, PPS7, Environment Agency	Regional Sustainable Development Framework V1, RSS, SCC's Climate Change Strategy -Stormy Weather	Structure Plan, Shaping the Future of Staffordshire (Community Strategy), Stoke-on-Trent Community Strategy 2004-2014, Stoke-on-Trent and Staffordshire LTPs 2000, SCC SPG Planning for Landscape Change, Stoke on Trent Environment Policy, Staffordshire Biodiversity Action Plan	Air, Water, Soil, Landscape, Population, Human Health	Local Air Quality, Noise, Greenhouse Gases, Water Environment	**1, 2**, 3, 4, 5, 6, 8, 9
To ensure good local air quality and to consider and minimise the effects of noise on animals and people	Directive 96/62/EC, A New Deal for Transport (1998), Government's Transport Sustainable Development Objectives, PPG24, PPG25, Environment Agency	Regional Sustainable Development Framework V1, RSS, SCC's Climate Change Strategy -Stormy Weather	Structure Plan, Stoke-on-Trent Community Strategy 2004-2014	Air, Population, Human Health	Local Air Quality, Noise	**1**, 4, 8, 9

[2] As listed in Table 4.1. Key SEA objective(s) shown in **bold**

Environmental / Sustainability Theme	Source			Relevance to Assessment		
	National/International	Regional	Local	SEA Topics	NATA Sub-objectives	SEA Objective[2]
To improve the integration and awareness of all forms of transport and reduce road movements, particularly by private car	A New Deal for Transport (1998), Government's Transport Sustainable Development Objectives, PPG13	Regional Sustainable Development Framework V1, Regional Spatial Strategy for the West Midlands, SCC's Climate Change Strategy - Stormy Weather	Local Transport Plan 2000: Stoke on Trent and Staffordshire, Shaping the Future of Staffordshire (Community Strategy)	Material Assets, Population , Human Health, Climatic Factors, Air	Access to the Transport System	1, 3, 8, **9**, 12
To reduce the amount of waste produced at source and increase the amount recycled	Directive 75/442/EEC Waste, National Waste Strategy, PPG10, Environment Agency	Regional Spatial Strategy for the West Midlands, SCC's Climate Change Strategy - Stormy Weather	Staffordshire Waste Local Plan, Structure Plan, Staffordshire and Stoke-on-Trent Minerals Local Plan (1994 - 2006), Stoke-on-Trent Community Strategy 2004-2014	Water, Soil, Landscape	Water Environment	**2,** 5, 6,
To reduce the emissions of greenhouse gases	A New Deal for Transport, PPG13, Government's Transport Sustainable Development Objectives, Environment Agency	West Midlands Regional Energy Strategy, Regional Spatial Strategy for the West Midlands, SCC's Climate Change Strategy -Stormy Weather	SCC's Climate Change Strategy -Stormy Weather, a draft for internal consultation	Climatic Factors, Air	Greenhouse gases	1, **3**, 8, 9
To ensure accessibility for all to jobs, health, education, leisure, retail, parks and open spaces and community facilities	PPG13, PPG17, Full Guidance on Local Transport Plans, Second Edition, December 2004	Regional Sustainable Development Framework V1, RSS	Shaping the Future of Staffordshire (Community Strategy), Stoke-on-Trent Community Strategy 2004-2014, Local Transport Plan 2000, Structure Plan, The state of the countryside in the West Midlands 2004	Population, Human Health, Biodiversity, Flora and Fauna	Access to the transport System, Community Severance, Business Users & Providers, Consumer Users	10, **12**, 13,
To ensure that the transport infrastructure is developed in ways that support and help drive forward the aims of the Region's regeneration programmes	PPS11, PPG15	RSS, Heritage Counts: State of the West Midlands' Historic Environment'	Structure Plan	Cultural Heritage, Landscape	Heritage, Community Severance	8, 9, 11, 12, **13**
To protect and enhance the region's cultural heritage and diversity	English Heritage PPG15, PPG16, The Historic Environment: A Force for the Future (DCMS, 2001)	Regional Sustainable Development Framework V1, English Heritage in the West Midlands Region, RSS, Heritage Counts: State of the West Midlands Historic Environment' (2005)	Structure Plan Renew AMI Heritage Characterisation Studies	Cultural Heritage, Landscape	Heritage	4, 6, **7**

Environmental / Sustainability Theme	Source			Relevance to Assessment		
	National/International	Regional	Local	SEA Topics	NATA Sub-objectives	SEA Objective[2]
To contribute to an efficient economy and to support sustainable economic growth in appropriate locations	European Funds Objective 3	Regional Sustainable Development Framework V1, RSS	Local Transport Plan 2000, Staffordshire Waste Local Plan, Structure Plan, Stoke-on-Trent Community Strategy 2004-2014, Shaping the Future of Staffordshire (Community Strategy)	Population	Public Accounts, Business Users & Providers, Consumer Users	**14**
Facilitating the growth of the local economy and encouraging prosperity for the benefit of individuals, employers and communities	European Funds Objective 3	Regional Sustainable Development Framework V1, RSS	Shaping the Future of Staffordshire (Community Strategy), Stoke-on-Trent Community Strategy 2004-2014, North Staffordshire Integrated Economic Strategy	Population, Human Health	Public Accounts, Business Users & Providers, Consumer Users	10, 11, **12**, 13, 14
To meet identified housing needs	PPG3, PPS11	Regional Housing Strategy, Regional Sustainable Development Framework V1, RSS	Structure Plan, The state of the countryside in the West Midlands 2004	Population, Human Health	Community Severance	5, 11, 12, 13
To develop a more sustainable integrated accessibility strategy	UK Sustainable Development Strategy, PPG9, RPG14, A New Deal for Transport	Regional Sustainable Development Framework V1, RSS	Structure Plan, Shaping the Future of Staffordshire (Community Strategy)	Population, Human Health	Community Severance	1, 3, 8, **9**, 12, 14
Ensure prudent and efficient use of natural resources	Directive 79/409/EEC, EU Biodiversity Action Plan for Conservation of Natural Resources, UK Sustainable Development Strategy, PPG9, RPG14, A New Deal for Transport, Environment Agency	Regional Sustainable Development Framework V1, West Midlands Regional Energy Strategy, RSS, SCC's Climate Change Strategy - Stormy Weather	Staffordshire Waste Local Plan, Structure Plan, Staffordshire and Stoke-on-Trent Minerals Local Plan (1994 - 2006), Stoke-on-Trent Community Strategy 2004-2014	Biodiversity, Flora and Fauna, Soil, Water, Landscape	Biodiversity	2, 3, **5**, 8, 9, 14
To maintain and enhance the region's biodiversity and ensure that there is no adverse effect on nationally important sites and protected or BAP species	Directive 79/409/EEC, EU Biodiversity Action Plan for Conservation of Natural Resources, UK Sustainable Development Strategy, PPG9, RPG14, A New Deal for Transport, Environment Agency	West Midlands Biodiversity Action Plan, Regional Sustainable Development Framework V1, RSS	Structure Plan, Shaping the Future of Staffordshire (Community Strategy), Stoke-on-Trent Community Strategy 2004-2014, Staffordshire Biodiversity Action Plan	Biodiversity, Flora and Fauna, Landscape	Biodiversity	**4**

Environmental / Sustainability Theme	Source			Relevance to Assessment		
	National/International	Regional	Local	SEA Topics	NATA Sub-objectives	SEA Objective[2]
To conserve and enhance the quality of the rural areas	A New Deal for Transport, English Heritage Countryside Agency	Regional Sustainable Development Framework V1, English Heritage in the West Midlands Region, RSS, PPS7	Staffordshire Waste Local Plan, Structure Plan, Shaping the Future of Staffordshire (Community Strategy), The state of the countryside in the West Midlands 2004, SCC SPG Planning for Landscape Change	Cultural Heritage, Landscape	Heritage, Landscape	2, 4, 5, **6**
To use non-renewable resources carefully promoting fuel efficiency	PPG22, UK Sustainable Development Strategy, Environment Agency, UK Sustainable Development Strategy	Regional Sustainable Development Framework V1, West Midlands Regional Energy Strategy, SCC's Climate Change Strategy - Stormy Weather	Structure Plan, Staffordshire and Stoke-on-Trent Minerals Local Plan (1994 - 2006), Stoke-on-Trent Community Strategy 2004-2014	Climatic Factors	Greenhouse Gases	1, 3, 8, **9**, 12

4. SEA OBJECTIVES

INTRODUCTION

4.1 The SEA Directive does not specifically require the use of objectives, indicators or targets in the SEA process, but they are a recognised way in which environmental / sustainability effects can be described, analysed and compared and their use is advocated in SEA guidance. Defining SEA objectives before the plan is written can help to provide an early indication of the key issues that are likely to require particular attention in the plan making process.

4.2 A framework of SEA objectives supported by appropriate indicators comprises the key component in completing stages C-E of the SEA, providing a systematic and easily understood tool around which to structure both supporting information and the prediction and assessment of environmental / sustainability effects arising from the implementation of the North Staffordshire LTP.

METHODOLOGY

4.3 The SEA framework has been developed using an iterative analytical process, based on discussion with appropriate officers, the analysis of relevant plans and programmes (as set out in Table 3.2), the evolving baseline (Appendix A and Sections 5), and analysis of key problems and opportunities (Section 6) and consultation on the draft framework set out in the Scoping Report.

SEA FRAMEWORK OF OBJECTIVES AND INDICATORS

4.4 The SEA framework of objectives and indicators is presented in Table 4.1 below. This includes a set of 14 SEA objectives, with examples of indicators for each objective. The availability and accuracy of data, on both current status and trends, as well as the availability of current or anticipated targets, will play an important part in the process of continually updating the indicators for each objective. Developing a good balance of appropriate and reliable indicators across the set of SEA objectives is critical for an effective but also practical monitoring programme. The development of the monitoring programme is presented in Section 10.

Table 4.1 - SEA Objectives

Key to data availability for indicators

Bold = Known data for indicator for either Stoke-on-Trent and Staffordshire or North Staffordshire

SEA Objective	Examples of Detailed Indicators	SEA Topics
1. To maintain and improve local air quality	**Levels of main pollutants for national air quality targets**	Air
2. To improve the quality of ground and surface waters	**% of water courses classified as good or fair biological quality**	Water, soil
	% of water courses classified as good or fair chemical quality	
3. To respond to climate change through reduced greenhouse gas (GHG) emissions	**Change in area wide vehicle kms on local authority managed roads**	Climatic factors
4. To conserve and enhance wildlife habitats and species	**Population of BAP priority species**	Biodiversity, flora and fauna
	Condition of BAP priority habitats	
	Extent of SSSIs in favourable condition	
5. To encourage better use of land and conserve soil resources and quality	Area of Grade 1, 2 and 3 (best and most versatile) agricultural land permanently lost as a result of transport schemes	Water, soil, material assets, landscape
	Area of vacant and derelict land	
6. To conserve and enhance the natural historic environment and landscape quality.	**Countryside Quality Counts (CQC) Indicator Profile for Potteries and Churnet Valley [CA64]**	Cultural heritage, landscape
	BV 219a: Total number of Conservation Areas	
7. To protect and enhance buildings, features and areas of historic, archaeological or cultural value, and their settings	**No. of Listed Buildings and proportion classified as 'at risk'.**	Cultural heritage, landscape
	No. of Scheduled and non-scheduled nationally important archaeological sites affected by transport schemes	
	Number of LTP proposals contributing to protection of places and buildings	
8. To reduce road traffic and congestion	**Congestion (vehicle delay)**	Air, climatic factors, human health
	Traffic growth	
9. To promote more sustainable modes of transport	**BVPI 102: Thousands of bus passenger journeys per year in the authority**	Air. climatic factors, human health, landscape, flora and fauna, biodiversity
	BVPI 104: Percentage of bus users satisfied with local bus services	
	Annualised index of cycling trips	
	Number of School Travel Plans	
	Mode share of journeys to school	
	Condition of surface footway: BVPI 187	
	Percentage of an authority's footpath network that is "easy to use": BVPI 178	
	Proportion of pedestrian crossings with facilities for the disabled	

SEA Objective	Examples of Detailed Indicators	SEA Topics
10. To Improve health and reduce health inequalities	**Standard mortality ratio for coronary disease**	Human health, population
	Annualised index of cycling trips	
11. To promote safe communities, reduce crime and the fear of crime	**BVPI 99(x) Number of deaths and serious injuries (all ages**	Human health, population
	BVPI 99(y) Number of children killed and seriously injured	
	BVPI 99(z) Number of people slightly injured in road traffic collisions	
12. To improve access to jobs and services	**Percentage of a) households b) households without a car; within 15 and 30 minutes of a major shopping centre by public transport**	Population, human health
	Percentage of a) households b) households without a car; within 15 and 30 minutes of a hospital by public transport	
	Access to bus stops, proportion of population within 400m of a bus stop with a minimum service provision of 30 minutes	
	Level of up to date timetable information at bus stops	
	Percentage of the population within 90 minutes of Birmingham or Manchester City Centres or Airports by public transport	
13. To support regeneration of deprived areas	**IMD and rank of target super output areas**	Population, human health, landscape, material assets
14. To support sustainable economic growth	**% change in VAT registered businesses**	Population, material assets, landscape
	Qualifications amongst population of working age	

COMPATIBILITY ASSESSMENT BETWEEN THE PROVISIONAL NORTH STAFFORDSHIRE LTP AIMS AND SEA OBJECTIVES

4.6 Table 4.2 provides an initial compatibility matrix to identify to what extent the Provisional North Staffordshire LTP Aims are compatible with the SEA objectives that have been outlined in Table 4.1, and vice versa.

4.7 Table 4.2 shows that, in general, none of the Provisional North Staffordshire LTP aims present a conflict with the SEA objectives. This may be attributed largely to the fact that the provisional North Staffordshire LTP contains few 'hard' infrastructure schemes, which are those that are likely to have significant environmental effects. Overall, Aim D shows most compatibility with the SEA framework, and this is not entirely surprising as this objective is closely aligned with general environmental sustainability aims. With its tight focus on human safety concerns, LTP aim A has little relevance to many of the environmentally focused SEA objectives.

4.8 The assessment indicates that, for the North Staffordshire aim B, compatibility with the SEA objectives is to a greater or lesser extent dependent upon details of actual implementation measures. This is also the case for aims C, E and F but in particular for the environmentally focused SEA objectives, but have greater compatibly with the more human focused SEA objectives.

Table 4.2 - Initial Compatibility Matrix between North Staffordshire LTP Aims and SEA Objectives

North Staffordshire LTP Aims	SEA Objectives													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
A Improved accessibility for all	✓		✓					✓	✓	✓	✓	✓	✓	
B Tackling traffic congestion	✓	✓	?	?	?	?	✓	✓	?	?	?	✓	✓	✓
C Improved travel safety and reduced fear of crime	✓		?	?	?	?	?	✓	✓	✓	✓	✓	✓	✓
D Better Air Quality	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	?
E Support for regeneration efforts and the local economy	✓	?	✓	?	✓	?	?	✓	✓	✓	✓	✓	✓	✓
F Cost effective maintenance and management of the transport system	✓		✓	✓	?	?	?	✓	✓	✓	✓	✓	✓	✓
G An enhanced quality of life	✓	?	?	✓	?	✓	?	✓	✓	✓	✓	✓	✓	✓

✓ broadly compatible
? Dependent on nature of implementation measures
(blank) not relevant
X potential conflict

SEA Objectives

1 - To maintain and improve local air quality
2 - To improve the quality of ground and surface waters
3 - To respond to climate change through reduced greenhouse gas emissions
4 - To conserve and enhance wildlife habitats and species
5 - To encourage better use of land and conserve soil resources and quality
6 - To conserve and enhance the natural historic environment and landscape quality
7 - To protect and enhance buildings, features and areas of historic, archaeological or cultural value, and their settings
8 - To reduce road traffic and congestion
9 - To promote more sustainable modes of transport
10 - To improve health and reduce health inequalities
11 - To promote safe communities, reduce crime and the fear of crime
12 - To improve access to jobs and services
13 - To support regeneration of deprived areas
14 - To support sustainable economic growth

5. BASELINE INFORMATION

INTRODUCTION

5.1 The SEA Directive says that the Environmental Report should provide information on:

> *"relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan" and the "environmental characteristics of the areas likely to be significantly affected"* (Annex I (b) (c))
>
> *"any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC"* (Annex I (c))

5.2 To accurately predict how potential North Staffordshire LTP strategies and measures will affect the environment, it is first important to understand the current state of the environment and then examine its likely evolution without the implementation of the plan.

METHODOLOGY

5.3 Baseline information provides the basis for predicting and monitoring environmental effects and helps to identify environmental / sustainability problems and alternative ways of dealing with them. Baseline data tables have been prepared for each SEA Topic (see para. 1.16) and are presented in Appendix A. These tables record:

- general indicators of relevance to the North Staffordshire LTP;
- quantified latest data;
- comparators (regional or national level data against which Staffordshire status can be compared);
- targets for the indicators, where they exist;
- trends for the indicators, where they can be identified;
- problems and constraints which arise; and
- the sources used to obtain the data.

5.4 Data were collated from a wide range of existing sources. No new data collection was undertaken. Detailed baseline data was collated for the North Staffordshire Integrated Transport Study, relevant information for this SEA is presented in Appendix B.

ENVIRONMENTAL BASELINE – KEY FEATURES

5.5 This section provides a summary of the key messages provided by the baseline data collected, to provide a general overview of the current situation and known historical trends. Appendix A contains the full baseline information, with quantified data, comparators for West Midlands, England, England and Wales where available, issues identified for this SEA, the associated SEA topics and the source of the information. It should be emphasised that the SEA baseline is by no means intended to be exhaustive. It is unlikely that all of the SEA Topics will be significantly affected by the implementation of the North Staffordshire LTP. However, in order to use the data to assist in identifying key issues, the coverage of the baseline should necessarily be quite broad.

Population, Human Health and Material Assets

5.6 The Census 2001 indicated that North Staffordshire has a population of 360,802 people, 51% female and 49% male. The demographic profile of the North Staffordshire highlights an above average proportion of people of older working age (35 to retirement) – 38.1% in Staffordshire compared to 36.2% at the national level; and lower than average proportion of people in the retired age range – 15.6% in North Staffordshire, compared to 18.3% at the national level.

5.7 Health statistics indicate that, in broad terms, illness and death rates are higher than national averages in North Staffordshire particularly for Stoke on Trent, as is the proportion of people suffering from limiting long term illness. Newcastle under Lyme compares more favourably with national averages as it is similar for all cancers, lower for all circulatory diseases and higher for coronary heart disease.

5.8 Crime statistics in North Staffordshire have shown a decline over recent years. However, Stoke on Trent remains above the national average for burglary offences and vehicle crime, whereas Staffordshire County Council area is below the national average for these two offences.

5.9 North Staffordshire suffers from a number of areas of highly concentrated multiple deprivation. Stoke-on-Trent and inner parts of Newcastle-under-Lyme have a large proportion of their population living amongst the most deprived 20% of Super Output Areas nationally. Parts of the area experience extreme deprivation with several SOAs falling into the most deprived 5% of SOAs nationally.

5.10 In 2003/04 Stoke on Trent City Council landfilled 21.01% of its domestic waste arisings and Staffordshire County Council 58.5%; both of which were below the national average. Both Councils composted a higher proportion of their waste than the national average and also used a higher percentage to recover energy.

5.11 Staffordshire County Council and Stoke-on-Trent City Council endeavour to recycle highways materials by re-using them in highways maintenance whenever possible. For example in 2004/05, 49,000 tonnes of recycled highways materials were used in Staffordshire County Council's highways maintenance by one of the two term contractors, which is an increase from 39,000 tonnes in 2001/02. In addition, measures are now in place to record use of recycled materials by both of the County's highways maintenance contractors and as such, the actual figure for 2005/06 is likely to represent a significant increase in use of recycled materials in highways schemes.

Air and Climatic Factors

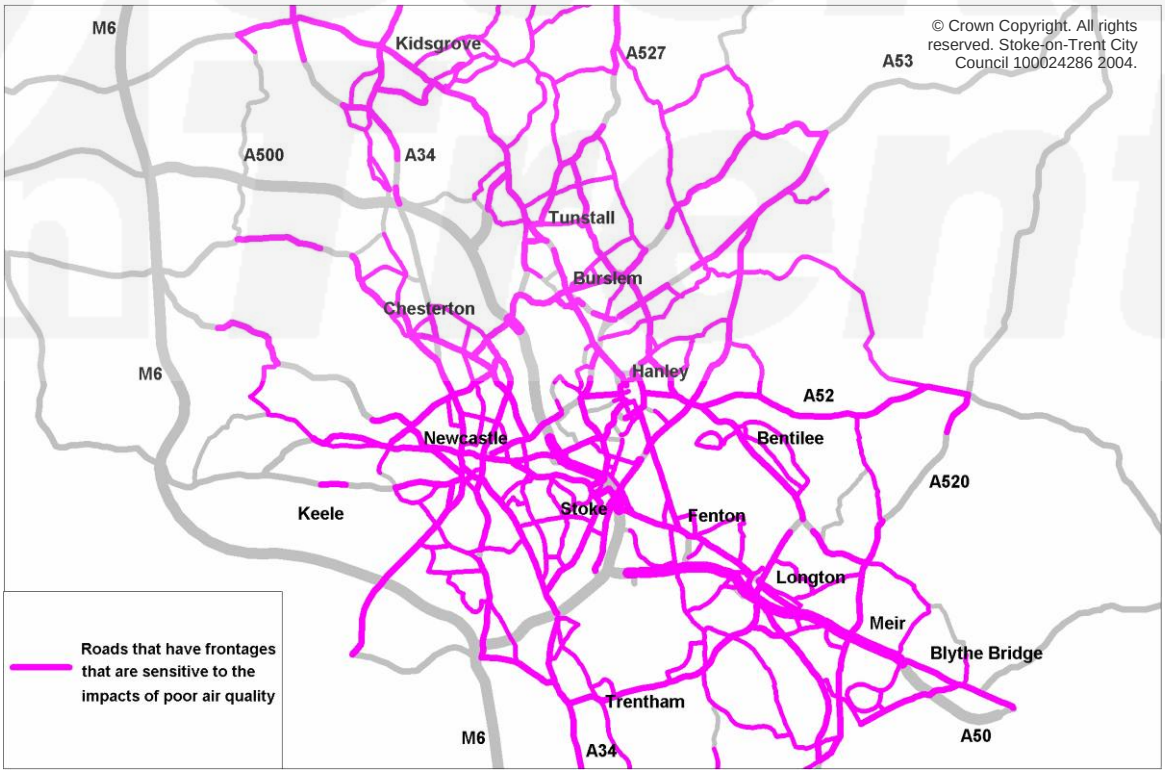
5.12 Poor air quality was identified as one of several key issues which require attention as part of the North Staffordshire Integrated Transport Study (NSITS). High traffic levels in many parts of the conurbation have given rise to localised air quality problems with Nitrogen Dioxide (NO_2) and particulates (PM10) being of concern.

5.13 For the foreseeable future air quality is still an important issue across North Staffordshire which needs to be addressed as part of the North Staffordshire LTP. Figure 5.1 shows roads in North Staffordshire where the frontages are sensitive to air quality.

5.14 However by 2021 NSITS has forecast that there will be little or no NO_2 air quality problems due to improvements in vehicle manufacture and tighter government legislation. There will be some PM10 issues with 17% of the network expected to experience a slight problem in excess of the Government's provisional targets for particulates.

5.15 As with most English local authority areas, North Staffordshire can be safely assumed to be a significant producer of greenhouse gasses, yet precise figures are notoriously hard to obtain. Efforts are being made to encourage more energy efficient practices. For example Staffordshire County Council has a discussion paper regarding climate change currently under consultation.

Figure 5.1 – Roads that have frontages sensitive to Air Quality in North Staffordshire[3]



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[3] Source: North Staffordshire Integrated Transport Study (NSITS)

Water

5.16 The Environment Agency's data shows that the overall chemical and biological quality of rivers and canals in the region has improved since 1990 although this rate of improvement has slowed in recent years with a marginal decline in chemical water quality since 2000.

5.17 Biological water quality in North Staffordshire's rivers and canals is below average – 84% of Staffordshire County Council's waterways were classed as good or fair quality in 2000 and 3.2% of Stoke on Trent's, compared to 94% nationally in the same year. Chemical water quality is in line with the national average for Staffordshire County Council, with 95% of the County's waterways being classed as good or fair but below average for Stoke on Trent as 24.5% of waterways were classed as good or fair.

5.18 The main watercourses in North Staffordshire are shown on Figure 5.2 below.

Cultural Heritage and Landscape

5.19 North Staffordshire's cultural heritage resource includes 425 listed buildings; 17 Scheduled Ancient Monuments (SAMs); 5 registered Historic Parks and Gardens and 23 Conservation Areas.

5.20 The historical sensitivity of Staffordshire has been mapped using point data, the North Staffordshire area of this mapping is shown as Figure 5.3 below. Staffordshire's Historic Landscape Characterisation is just coming to an end and the data will be available to be incorporated into our SEA monitoring.

5.21 The North Staffordshire LTP falls within the Potteries and Churnet Valley Character Area [CA64]. The overall assessment of the Countryside Quality Counts Indicator Profile for the period 1990 to 1998 is limited or small changes consistent with character. Changes are mostly small and consistent with character, although development may offset this to some extent. Data for the 1998 to 2003 period is currently being analysed by the Countryside Quality Counts project.

5.22 The pottery industry and the mineral extraction that supported it have given the Potteries an interesting historic landscape and townscape which includes bottle kilns and many industrial buildings. Regeneration and development in the North Staffordshire conurbation continues to enhance the landscape integrating new and historic buildings. For example Renew have commissioned Heritage Characterisation Studies to inform the development of their Area of Major Intervention Plans in the Urban Core.

Biodiversity, Flora and Fauna

5.23 Although North Staffordshire is predominantly urban there is a rich biodiversity with 4 SSSIs, 1 National Nature Reserve, 6 Local Nature Reserves and 48 Grade 1 Sites of Biological Importance. The biological sensitivity of this area has been surveyed and mapped, as shown in Figure 5.4 below.

5.24 The Staffordshire Biodiversity Action Plan (BAP) individually lists 28 species and 15 BAP priority habitats that are prevalent in the County. BAP habitats are shown in Figure 5.2 below.

Figure 5.2 – BAP habitats in North Staffordshire

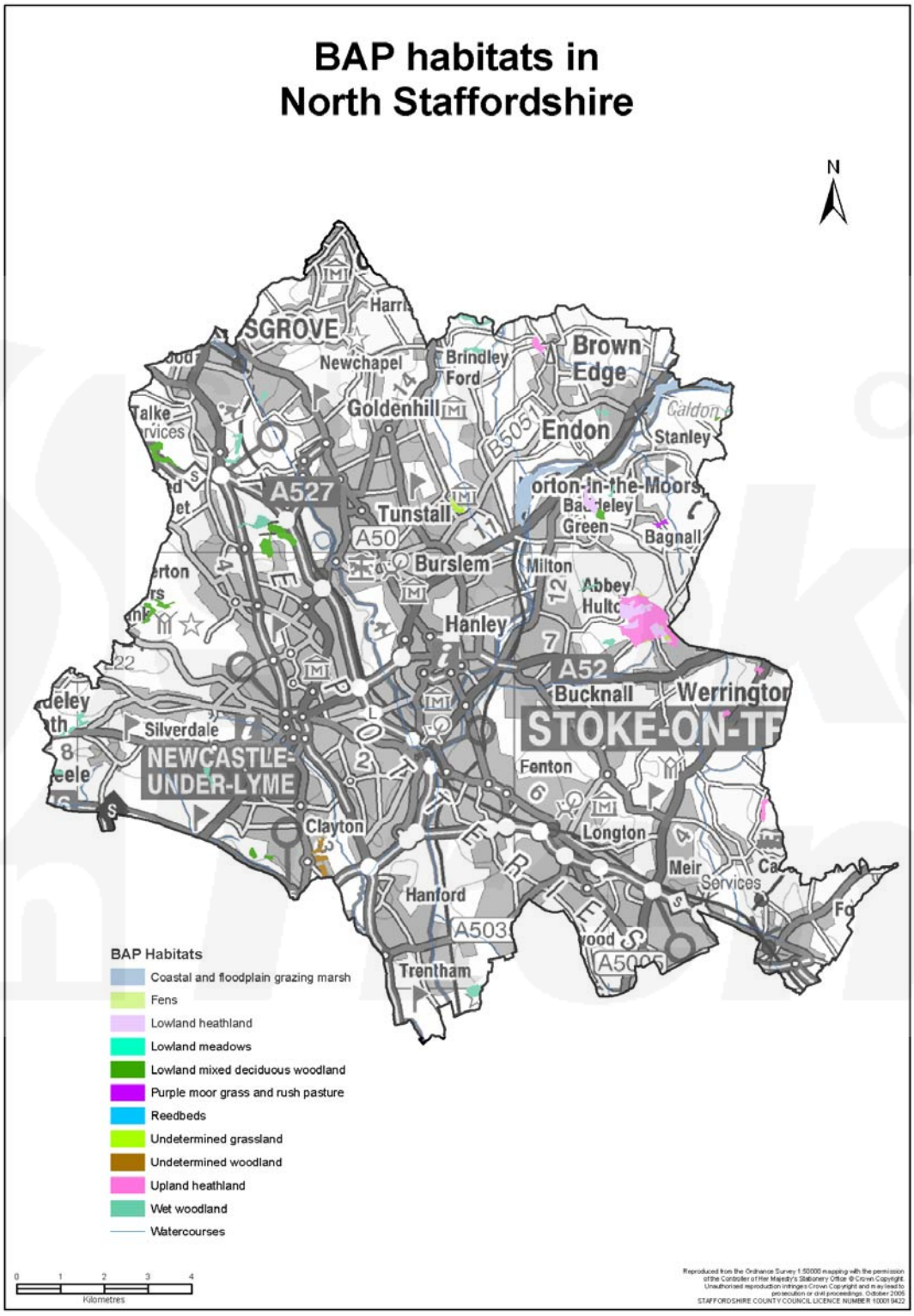


Figure 5.3 - Historic Sensitivity in North Staffordshire

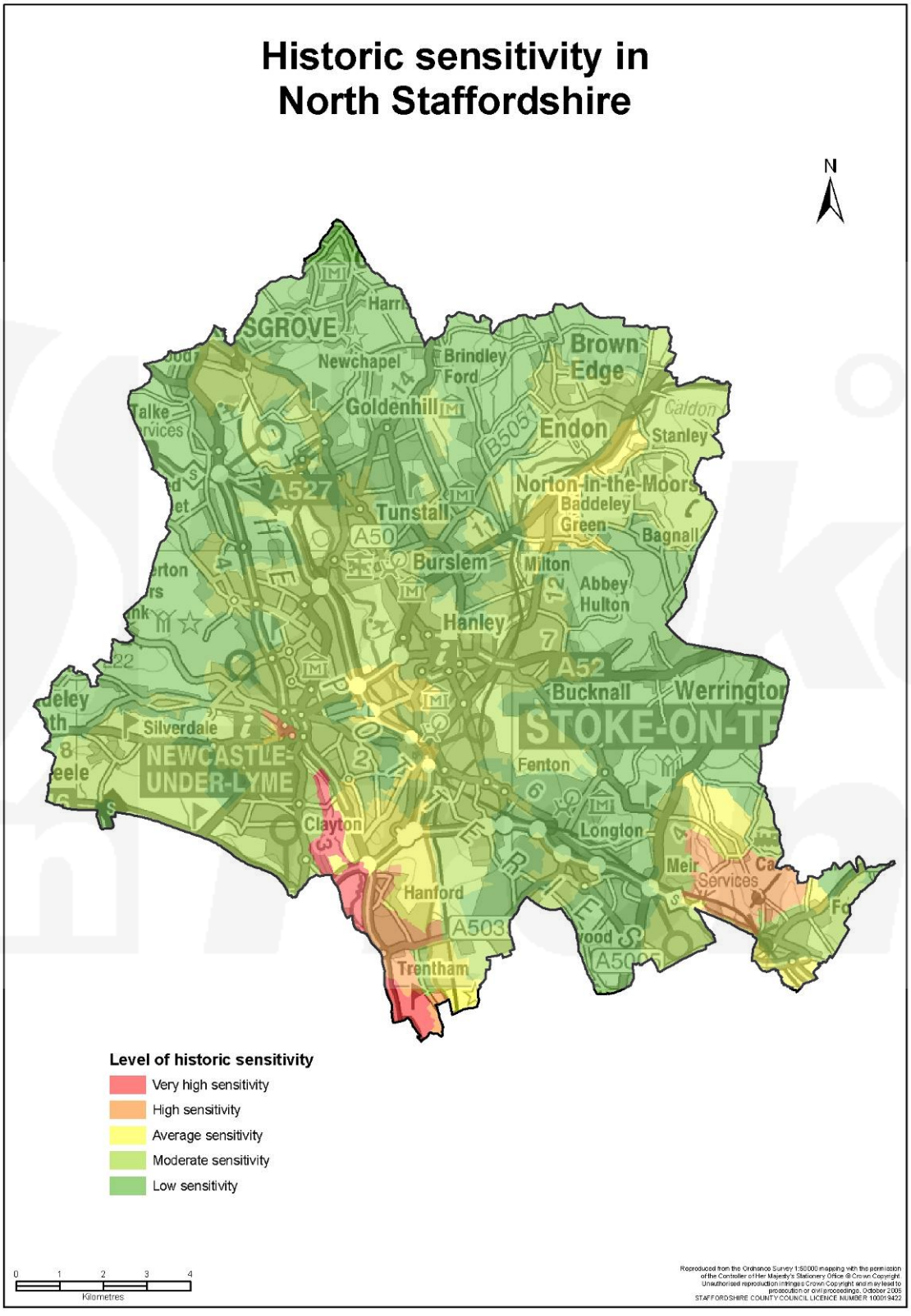
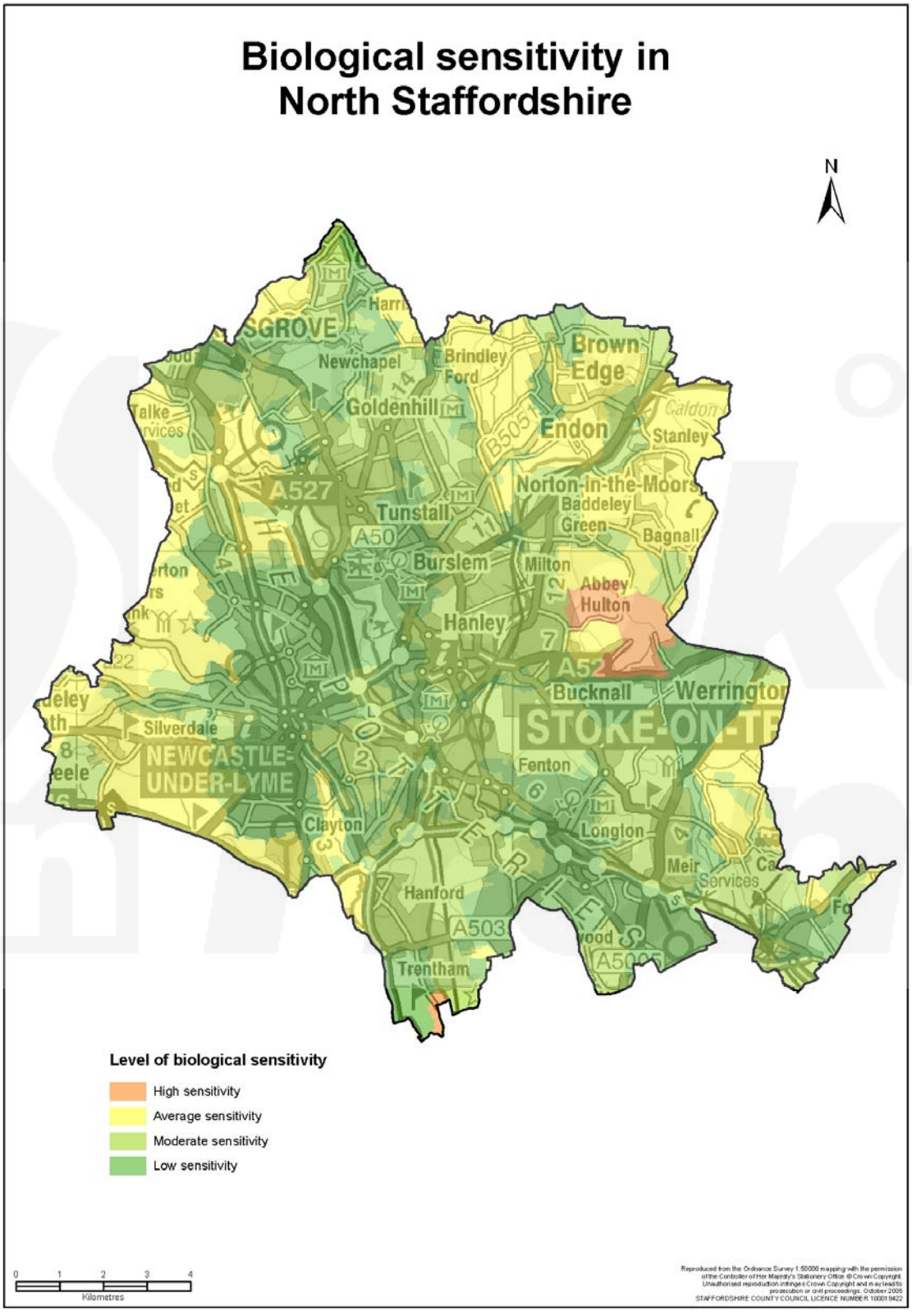


Figure 5.4 - Biological Sensitivity in North Staffordshire



Transport

5.25 The Provisional North Staffordshire Local Transport Plan gives a detailed description of transport problems and opportunities; a summary of quantified information available is given here.

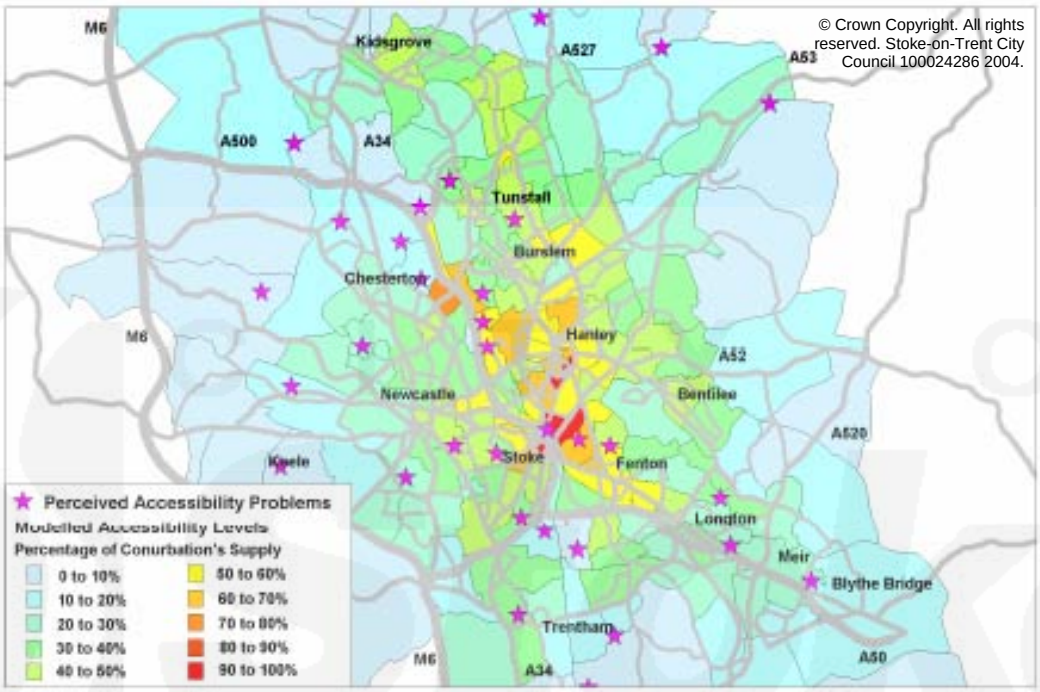
5.26 In keeping with national trends, road traffic volumes have shown a steady increase over past decades. Traffic movements are complex in the conurbation as there are a number of centres for employment and retail. The 2001 Census showed that in North Staffordshire 70.38% of the working age population travel to work by car. This is higher than the national average even though the percentage of households owning at least one car is lower. The North Staffordshire Transport Model maintained by Stoke-on-Trent City Council shows that there are existing link efficiency problems during the evening peak period which are concentrated primarily on those routes which carry the highest levels of traffic, namely the trunk roads and A road network. It is noted that 25.8% of the trunk road network has at least a slight problem, i.e. where the ratio of flow to road capacity is between 81% to 90% and the equivalent figure for the Strategic Highway Network is 13.2%. Similarly the junctions on the network also appear to show some major problems with 17.3% of junctions on the trunk roads exhibiting some delays (an average vehicular delay of at least 30 second or more) and 13.6% of junctions on the Strategic Highway Network.

5.27 Satisfaction with local bus services is similar for Stoke on Trent City Council and Staffordshire County Council at 48% and 47% respectively. In North Staffordshire 8.50% of the working age population travel to work by bus, 0.41% travel to work by rail and in 2000 passenger demand on the West Coast Mainline from Kidsgrove to Stoke was around 400-450 passengers per day.

5.28 Road accident casualties across North Staffordshire have declined significantly since records began. There has been a decline of 11% since the 1994/98 average baseline was established in the Government's road safety strategy. This decrease in casualties is against a background increase in traffic levels across North Staffordshire and is also comparable to the national decrease of 12%.

5.29 Access to essential services and facilities is an important issue for the Local Transport Plan. The North Staffordshire Integrated Transport Study looked at the percentage of the conurbation's households that experience serious accessibility problems to a variety of key destinations. Serious problems are experienced by 47.9% of households when accessing hospitals and 23.2% of households when accessing basic food and household goods. Areas close to the main centres in North Staffordshire such as Stoke and Hanley have higher accessibility levels, as shown in Figure 5.5 below from the North Staffordshire Integrated Transport Study. The lower the percentage on Figure 5.5 the lower the public transport accessibility.

Figure 5.5 - Accessibility Levels in North Staffordshire[4]



[4] Source: North Staffordshire Integrated Transport Study (NSITS)

ENVIRONMENTAL BASELINE DATA AND TRENDS FOR THE SEA FRAMEWORK

5.30 The SEA framework of objectives is the key tool used in the assessment of potential effects arising from implementation of the plan. The prediction of effects, in terms of their magnitude, frequency, duration, and spatial extent, is conducted via detailed analysis of the baseline data. It is thus important to ensure that critical aspects of the baseline can be directly related to the objectives and supporting indicators of the SEA framework. Determining the significance of predicted effects is perhaps the most critical task in the SEA. The picture that the baseline presents in terms of the SEA framework is the starting point for this.

5.31 Table 5.1 below presents an analysis of the fundamental characteristics of the baseline (summary of current conditions, current trends, and sensitivity to change) against the SEA objectives using a simple three-point normative scale as follows:

Current Conditions - good/moderate/poor;

Current Trends – improving/stable/declining; and

Sensitivity to Change – high/medium/low.

5.32 Sensitivity to change in the context of SEA represents the extent to which, for instance, ecological thresholds may be close to being breached or carrying capacity exceeded, such that relatively small changes might be likely to induce disproportionately large effects, which in some instances might have wide-ranging and/or unexpected consequences. An example might be the decline of a particular wildlife population below the level at which it is viable in a particular habitat.

5.33 The quality of the information base gives an indication of the certainty with which the other three parameters are known, and this is presented in Table 5.1 using a three-point scale (high/medium/low).

Table 5.1 - SEA Baseline Data and Trends Summary

SEA Objective	Cond	Trend	Sensitivity	Info Qlty	Commentary
1 Maintain and improve local air quality	Mod	Decl	High	Med	High traffic levels have given rise to localised air quality problems with high NO_2 and PM10 levels (see Appendix B).
2 To improve the quality of ground and surface waters	Poor	Impr	Low	Med	Water quality is below average in North Staffordshire. The condition is improving due to tighter regulation and enforcement of discharges.
3 To respond to climate change through reduced GHG emissions	Mod	Decl	High	Med	There is little quantitative data available regarding GHG emissions in North Staffordshire. Motorised transport is recognised as a key contributor, NSITS estimates the size of this contribution (see Appendix B).
4 To conserve and enhance wildlife habitats and species	Poor	Decl	High	High	The Staffordshire BAP, SSSIs, National and Local Nature Reserves are monitored to conserve wildlife habitats and species. English Nature judge that negative trends are likely to apply from an already low baseline despite largely positive condition of SSSIs.
5 To encourage better use of land and conserve soil resources and quality	Mod	Impr	Med	Med	The amount of waste landfilled is below average in North Staffordshire. Land use is monitored through the Local Authorities' LDF AMRs.
6 To conserve and enhance the natural historic environment and landscape quality	Poor	Impr	Med	High	The townscape of North Staffordshire is being conserved and enhanced due to investment in regeneration schemes.
7 To protect buildings and sites of archaeological, cultural and historic value and their settings	Good	Stable	Med	High	Details of these sites are kept by Staffordshire County Council and Stoke-on-Trent City Council as part of programmes to protect them. In Stoke-on-Trent 25 significant historic buildings have been repaired or bought back in to use during 2004-05. The City Council has also helped to set up the North Staffordshire Architect Centre, Urban Vision, to promote high standards of design and conservation for the built environment.
8 To reduce road traffic and congestion	Mod	Decl	High	High	NSITS identifies road traffic and congestion problems through the use of a transport model. (see Appendix B).
9 To promote sustainable modes of transport	Mod	Decl	High	Med	Census and transport survey data show a decline in the use of sustainable modes of travel. NSITS suggests increased levels could be achieved. (see Appendix A and B)
10 To improve health and reduce health inequalities	Poor	Stable	Med	Med	The Health Inequalities Profile for North Staffordshire produced by the Director for Public Health in 2003 show that the health of the population of the North Staffordshire Health Action Zone (HAZ) is among the worst nationally.
11 To promote safe communities, reduce crime and the fear of crime	Mod	Impr	Med	Med	Staffordshire Police Best Value Performance Plan 2005/06 shows a declining level of crime from an above average level.
12 To improve access to jobs and services	Poor	Decl	High	High	NSITS has carried out considerable research on accessibility, demonstrating serious problems that will worsen without intervention (see Appendix B).
13 To support regeneration of deprived areas	Mod	Stable	Med	Med	Areas of North Staffordshire score high on the Index of Multiple Deprivation.
14 To support sustainable economic growth	Mod	Stable	Med	Med	The Integrated Economic Development Strategy identifies a low skills, low wage economy and proposes to create 5,000 new jobs over the next 5yrs.

LIKELY EVOLUTION OF THE BASELINE WITHOUT THE NORTH STAFFORDSHIRE LOCAL TRANSPORT PLAN

5.34 Table 5.2 below presents an analysis of the fundamental characteristics of the short term baseline (summary of conditions, trends, and sensitivity to change in 5 years) against the SEA objectives should the North Staffordshire Local Transport Plan not be implemented. This uses the same simple three-point normative scale as Table 5.1:

Current Conditions - good/moderate/poor;

Current Trends – improving/stable/declining; and

Sensitivity to Change – high/medium/low.

5.35 The quality of the information base gives an indication of the certainty with which the other three parameters are known, and this is presented in Table 5.2 using a three-point scale (high/medium/low).

5.36 Table 5.3 uses the same format as Table 5.1 and Table 5.2 to present an analysis of the fundamental characteristics of the long term baseline (summary of conditions, trends, and sensitivity to change in 15years) against the SEA objectives should the North Staffordshire Local Transport Plan not be implemented.

Table 5.2 - SEA Future (short term) Baseline Data and Trends Summary

SEA Objective	Cond	Trend	Sensitivity	Info Qlty	Commentary
1 Maintain and improve local air quality	Mod	Stable	High	Med	Without the implementation of LTP local air quality would reduce in line with the estimates produced in NSITS. In the short term, transport policy would not be able to react to the developing AQMA action plan and fully contribute to improving local air quality in North Staffordshire. (see Appendix B)
2 To improve the quality of ground and surface waters	Poor	Impr	Low	Med	Water quality is below average in North Staffordshire. The condition is improving due to tighter regulation and enforcement of discharges.
3 To respond to climate change through reduced GHG emissions	Mod	Decl	High	Med	Motorised transport is recognised as a key contributor to greenhouse gas emissions and without the implementation of LTP emissions levels would rise. However, there is limited data to help establish the degree of rise. The NSITS work shows that over a longer period (to 2021) total emissions from transport will increase by 2.5% (see Appendix B).
4 To conserve and enhance wildlife habitats and species	Poor	Decl	High	High	Habitats and species on Staffordshire County Council or Stoke on Trent City Council managed land are generally likely to improve through the management of those sites. However, more local sites outside council management are likely to decline due to a lack of resources. Also while recent changes in agricultural support mechanisms are predicted to help maintain the current diversity of habitats, external pressures such as climate change make the prediction of overall effects difficult. English Nature judge that negative trends are likely to apply from an already low baseline despite largely positive condition of SSSIs.
5 To encourage better use of land and conserve soil resources and quality	Mod	Impr	Med	Med	Although Council managed land is likely to improve in quality, overall trend may be towards a declining landscape quality as a result of increased development pressures and projected increases in traffic movements, car ownership and population increases.
6 To conserve and enhance the natural historic environment and landscape quality	Poor	Impr	Med	High	The quality of landscapes that are managed by Staffordshire County Council and Stoke on Trent City Council will generally remain in a stable condition in the short term. Without the LTP there is likely to be an increase in traffic that may have a detrimental effect on the landscape although this is limited in the short term.

7 To protect buildings and sites of archaeological, cultural and historic value and their settings	Good	Stable	Med	High	The Monuments at Risk Survey (1995) has identified an average loss of 9% of total recorded archaeological sites and monuments for regions throughout England in the fifty years between 1945 and 1995. For the West Midlands region the loss of earthworks for the same period was also 9% and it is therefore presumed that without the implementation of the LTP this rate will continue. The survey also identified that property development and urban expansion accounted for 27% of observable cases of wholesale destruction and it is considered that transport and infrastructure development is a contributor to this. In Stoke-on-Trent 25 significant historic buildings have been repaired or bought back in to use during 2004-05. The City Council has helped to set up the North Staffordshire Architect Centre, Urban Vision, to promote high standards of design and conservation for the built environment.
8 To reduce road traffic and congestion	Mod	Decl	High	High	NSITS identifies congestion problems through the use of a transport model. Increases in population households and employment will fuel traffic growth.
9 To promote sustainable modes of transport	Mod	Decl	High	Med	Without LTP sustainable travel would continue to be promoted as it is currently and therefore the trend in the short term would remain static.
10 To improve health and reduce health inequalities	Poor	Stable	Med	Med	A focus on public health matters through the North Staffordshire Health Action Zone (HAZ) will help to improve the health of people in North Staffordshire and reduce health inequalities.
11 To promote safe communities, reduce crime and the fear of crime	Mod	Impr	Med	Med	Staffordshire Police Best Value Performance Plan 2005/06 shows a declining level of crime from an above average level. Without the LTP it is expected that crime levels will continue to decline.
12 To improve access to jobs and services	Poor	Decl	High	High	Access to many types of facilities would worsen without the LTP. The only exception being healthcare facilities which would remain static; 6.7% of people continuing to have serious problems accessing healthcare facilities.
13 To support regeneration of deprived areas	Mod	Impr	Med	High	Short term interventions are likely to improve the levels of deprivation in the Newcastle-under-Lyme area, while longer term initiatives such as Renew and the North Staffordshire Regeneration Zone should also provide improvements to the physical and social environments in the area. Improved access to employment opportunities and local services as part of this package of interventions is essential and could be undermined without the LTP.
14 To support sustainable economic growth	Mod	Impr	Med	Med	In the short term future, visible signs of the restructured economy will be evident, and partially dependent on improved transport links through the area. Plans to develop the Education Quarter in Stoke town centre may provide a skills boost to the local economy which may also demand improved links. The potential of the area to accommodate regional logistics operations will depend on the transport infrastructure improvements such as the A500 completion.

Table 5.3 - SEA Future (long term) Baseline Data and Trends Summary

SEA Objective	Cond	Trend	Sensitivity	Info Qlty	Commentary
1 Maintain and improve local air quality	Mod	Decl	High	Med	By 2021 there will be a number of locations that have localised PM10 and NO2 emissions problems. In terms of air quality at the roadside, this will improve from the 2002 baseline to below government targets due to improvements in vehicle design mitigating increased traffic levels (see Appendix B).
2 To improve the quality of ground and surface waters	Poor	Impr	Low	Med	Water quality is below average in North Staffordshire. The condition is improving due to tighter regulation and enforcement of discharges.
3 To respond to climate change through reduced GHG emissions	Mod	Decl	High	Low	Motorised transport is recognised as a key contributor to greenhouse gas emissions and without the implementation of LTP emissions levels would rise. However, there is limited data to help establish the degree of rise. The NSITS work predicts that to 2021 total emissions from transport will increase by 2.5% (see Appendix B).
4 To conserve and enhance wildlife habitats and species	Poor	Decl	High	High	Habitats and species on Staffordshire County Council and Stoke on Trent City Council managed land will benefit from the long term management of those sites but it is still difficult in the longer term to estimate the condition of those areas. English Nature judge that negative trends are likely to apply from an already low baseline despite largely positive condition of SSSIs.
5 To encourage better use of land and conserve soil resources and quality	Mod	Stable	Med	Med	The amount of waste landfilled is below average in North Staffordshire. Land use is monitored through the Local Authorities' LDF AMRs.
6 To conserve and enhance the natural historic environment and landscape quality	Mod	Stable	Med	High	Following a projected declining trend in the short term, it is likely that external policy responses to increased development pressures, plus increased maturity of landscaping associated with new development will help to stabilise the situation.
7 To protect buildings and sites of archaeological, cultural and historic value and their settings	Mod	Decl	Med	High	The Monuments at Risk Survey (1995) has identified an average loss of 9% of total recorded archaeological sites and monuments for regions throughout England in the fifty years between 1945 and 1995. For the West Midlands region the loss of earthworks for the same period was also 9% and it is therefore presumed that without the implementation of the LTP this rate will continue. The survey also identified that property development and urban expansion accounted for 27% of observable cases of wholesale destruction and it is considered that transport and infrastructure development is a contributor to this. There are no known sites that could reach a critical threshold level within the next 10-15 years; however, the Buildings at Risk survey (2004-05) indicates that there are 43 such

					buildings in Staffordshire. Of these, 11 are shown to be at immediate risk with no solution identified and 25 are either at immediate risk of further deterioration (with a solution agreed) or showing signs of decay (with no solution agreed). The City Council has helped to set up the North Staffordshire Architect Centre, Urban Vision, to promote high standards of design and conservation for the built environment.
8 To reduce road traffic and congestion	Poor	Decl	High	High	Without the implementation of LTP road traffic and congestion will rise with more of the network experiencing moderate or serious problems (see Appendix B).
9 To promote sustainable modes of transport	Mod	Decl	High	Med	In the long term, there will be a decline in people using sustainable modes of travel as no new promotion initiatives will have begun.
10 To improve health and reduce health inequalities	Mod	Stable	Med	Med	In the longer term there will be an improvement in people's health generally as the Health Action Zone strategy will have been implemented and preventative measures currently being promoted will have begun to take effect.
11 To promote safe communities, reduce crime and the fear of crime	Good	Impr	Med	Med	Staffordshire Police Best Value Performance Plan 2005/06 shows a declining level of crime from an above average level.
12 To improve access to jobs and services	Poor	Decl	High	High	The NSITS work estimates that accessibility levels will reduce by 2021 with 32% of people experiencing serious problems when accessing education facilities and 25% when accessing basic food/ household goods.
13 To support regeneration of deprived areas	Mod	Stable	Med	High	In the longer term programmes such as Renew and the North Staffordshire Regeneration Zone should provide a beneficial boost to local area improving deprivation levels through better access, housing and ability to access to variety of opportunities. The provision of a well developed transport system is key to improving deprivation.
14 To support sustainable economic growth	Mod	Stable	Med	Med	In the longer term, targeted approaches towards improving the economy as set out in NSIEDS should bear results. Premium Employment sites will be coming forward and the North Staffordshire sub region will develop it's potential for further sustainable economic development opportunities. The maintenance of an efficient and reliable transport network and improved accessibility will be needed to achieve this potential. The LTP is to be informed by the strategy put forward by NSITS, which was integrated with the NSIEDS, not delivering the LTP could undermine the NSIEDS.

6. SUMMARY OF ENVIRONMENTAL PROBLEMS AND OPPORTUNITIES

INTRODUCTION

6.1 The SEA Directive states that the Environmental Report should provide information on:

"any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC" (Annex I (c))

METHODOLOGY

6.2 Key environmental / sustainability issues and problems that affect the LTP were identified through discussions with the Councils' officers, review of published documents and analysis of existing data available, together with analysis of the results of consultation working groups in respect of the LTP. These are summarised in Table 6.1 below. Opportunities for how the LTP could assist in addressing these issues and problems were also identified and are presented in the same table.

Table 6.1 - Key Environmental / Sustainability Problems and Opportunities

Key Issues / Problems	Opportunities / Implications for LTP	SEA Topics
• **Accessibility**	Below national average level of car ownership in North Staffordshire means that non-car accessibility is essential for many people at many times of the day. NSITS found that car-based accessibility is affected by congestion, and in particular unpredictable congestion caused by incidents. Congestion also compounds problems with passenger transport accessibility by reducing its reliability and efficiency. Modal share indicates an over-reliance on the private car and reducing patronage of public transport. Improvements to the passenger transport network should be considered as a priority and new development should only be permitted in locations where appropriate infrastructure is in place. Analysis of accessibility reveals problems in particular to education, hospital and shopping facilities. The LTP will need to include the following types of actions for improving accessibility: • Providing alternatives to the car • Addressing crime and personal security issues • Encouraging people to consider whether they need to use the car • Managing the existing highway network to tackle congestion • Ensuring that accessibility is considered in all land use planning decisions • Delivering highway improvements as necessary	Population, Material Assets

Key Issues / Problems	Opportunities / Implications for LTP	SEA Topics
• **Urban population decline**	Migration patterns and population projections have identified decreases in population in North Staffordshire. Between the censuses undertaken in 1991 and 2001 the North Staffordshire sub-region of The City of Stoke-on-Trent together with the Boroughs of Newcastle-under Lyme and Staffordshire Moorlands experienced a net decrease in population of 1.9%, to 457,000. Stoke-on-Trent's population in 2001 is recorded as 240,636. This was a decline of almost 9,000 people, 3.5%, since 1991. The population of the Boroughs of Newcastle-under-Lyme (+1.0%) and Staffordshire Moorlands (-1.3%) experienced nominal growth and decline respectively. If Stoke-on-Trent is excluded from the Staffordshire County data, the county population increased by 1.9% between 1991 and 2001. The population in southern parts of Staffordshire is projected to continue increasing. By comparison the population of England and Wales as a whole increased 2.6% over the same period, while the West Midlands experienced a 0.7% increase. The neighboring counties of Cheshire and Derbyshire (excluding the city of Derby) increased by 3%. Notable growth areas were the South-East, South-West and the East of England with 5% increases over the 1991-2001 period. Housing Market failure in the urban area resulted in North Staffordshire being designated as a Housing Market Renewal Pathfinder in April 2002. 67,000 properties and 147,000 residents are within the North Staffordshire Pathfinder area. The Pathfinder has identified the negative impacts of motorised transport as a contributor to housing market failure and the need to improve the transport environment as part of the intervention. Population projections have identified the continuation of a significant increase in numbers of older people in the sub region as living standards and healthcare improve. The increases in very elderly people living in the area are likely to increase demands on social services and healthcare. Just over 4% of the population of the North Staffordshire Local Transport Plan area describe themselves in the 2001 census as from minority ethnic groups which breaks down as follows: Mixed 0.8% Asian 2.6% Black 0.4% Chinese 0.2% Other ethnic groups 0.2% The Regional Spatial Strategy proposes focussing future development in the North Staffordshire and West Midlands conurbations as opposed to dispersing outside of these areas. This will help to minimise longer distance commuting into the conurbations and help offset traffic, congestion and air quality problems on key routes.	Population, Human Health, Material Assets

Key Issues / Problems	Opportunities / Implications for LTP	SEA Topics
• **Deprivation** • **Regeneration**	Within North Staffordshire severe socio-economic problems persist, including low incomes, low educational attainment and poor levels of health. Using the average of super output area scores Stoke-on-Trent ranked 18th most deprived out 354 English districts. Newcastle-under-Lyme and Staffordshire Moorlands ranked 138th and 182nd respectively. Promoting regeneration is a key objective of the North Staffordshire LTP. The North Staffordshire LTP should contribute to the aim of regeneration through the development of packages of measures to support the regeneration initiatives, improve accessibility to services and employment, improve quality of life and tackle congestion. Opportunities for the Housing Market Renewal Pathfinder and the LTP to dovetail together include: • designing for sustainable movement within and through intervention areas in particular the Urban Core; • the creation of sustainable communities to reduce the need to travel; • taking the opportunity to increase transport capacity on arterial roads where properties are removed as part of a structured programme; • tailoring the delivery of quality bus corridors to accord with Renew's intervention delivery timescales; and, • providing environmental and streetscape improvements to encourage walking and cycling. Development and regeneration proposals should accord with the Regional Spatial Strategy (RSS) and should be supported by appropriate transport infrastructure. This should help to: • reduce the pressure for development in peripheral and countryside areas, which in turn, will reduce distances travelled and vehicular pollution; • preserve attractive and productive countryside areas (by reusing urban land); and • reduce the consumption of aggregates and other primary materials for construction. The RSS identifies North Staffordshire as a Major Urban Area (MUA). The Regional Transport Strategy (RTS) recognises that within MUAs transport can make a significant contribution to improving the overall quality of life and that enhancing accessibility and mobility whilst improving environmental quality are vital components of urban renaissance. The RTS states that tackling congestion, through making efficient use of the existing transport network, improving travel choices and traffic restraint where appropriate, must be a key priority. Also it states that in MUAs with their greater concentration of population, there are better opportunities for public transport, while the proximity of facilities can result in short journeys and that the retention of services in communities is as important in MUAs as elsewhere in the Region.	Population, Human Health, Material Assets,

Key Issues / Problems	Opportunities / Implications for LTP	SEA Topics
	The RTS advises that demand for highway space will generally need to be managed in the MUAs, although there remain some areas where targeted road building and improvements may be necessary to provide a balanced network or support regeneration, particularly in urban Regeneration Zones. The RTS includes specific proposals of relevance to North Staffordshire: • A programme of measures aimed at achieving behavioural change, including: o travel awareness o walking/cycling networks o quality public transport o access to regeneration sites • West Midlands Rail Short and Medium term capacity and performance enhancement schemes • A500 City Road & Stoke Road Junctions – under construction • Local congestion charging studies • A50 Trentham Lakes Junction – under construction • Improved public transport network in North Staffordshire • Improved access to regeneration sites	
• **Traffic growth** • **Congestion** • **Modal shift**	Across North Staffordshire traffic congestion is having a negative impact on the local economy and also people's quality of life. Congestion has the following disbenefits: • Delays to deliveries and supplies which affect productivity • Increase to fuel costs which can reduce a business's competitiveness • The generation of excessive air pollution, noise, and dust • Reduced local amenity • Bus service unreliability Traffic growth can also cause an increase in the levels of traffic noise, spreading of peak periods of traffic and growth in traffic at night with a 24 hour economy can cause problems in locations sensitive to traffic noise. Traffic noise can devalue housing, the detrimental effect of traffic noise on health is also increasingly recognised. Recent Government findings of traffic speeds (Traffic Speeds in English Urban Areas, DfT 2004) found that the Stoke/Newcastle-under-Lyme urban area experienced the largest decrease in average speed over the period 1999-2004 of all the urban areas outside London. The North Staffordshire Integrated Transport Study found that the increase in population, households and labour force along with current transport trends will result in a 16% increase in the number of motorised trips per day (from around 1.35 million in 2002 to just over 1.55 million trips in 2021). This results in the following observations: • There will be 120,000 motorised person trips during the future 2021 evening peak hour period, travelling in some 82,500 cars and 225 individual bus	Population, Human Health, Air, Material Assets

Key Issues / Problems	Opportunities / Implications for LTP	SEA Topics
	services. • The average trip length by cars during the evening peak hour is forecast to rise from 37km in 2002 to 42km in 2021. • The highest increases in travel occur on the M6 motorway where overall levels of traffic growth are influenced by changes in the national economy, rather than the local economy. The increases are of the order of 37%. • When the influence of the Motorway is excluded, traffic levels in terms of vehicular kilometres driven increase by around 17%, with increases on the A50(T)/A500(T) being 20% and the increases on other roads being around 16%. Within the urban area itself there is an increase of 16% in the number of vehicle kilometres driven • The number of vehicular hours that cars and goods vehicles spend travelling within the urban area during the 2021 evening peak period increases by around 32%, reflecting higher levels of congestion and lower travel speeds; and • Within the urban area, travel speeds fall by around 12%, from 31 kph to 27.2 kph, with the highest reductions in travel speed being on the A50(T)/A500(T) • Trunk Roads where speeds fall by 17%, from 48.8 kph to 40.5 kph. LTP strategies to tackle congestion and improve accessibility will need to minimise the disbenefits of congestion and traffic growth by reducing the need to travel, achieving modal shift and improving the efficiency of the transport network.	
• **Air quality**	High levels of motorised traffic in many parts of the conurbation have given rise to localised air quality problems with nitrogen dioxide (NO2) and particulates (PM10) being of concern. Real time and passive air quality monitoring is conducted throughout the city, which targets areas where elevated pollution levels are anticipated. As a result of the first round of the review and assessment process, Stoke-on-Trent City Council concluded that the nitrogen dioxide annual mean objective would be exceeded in the Cliffe Vale (East) area of the City, by the target date of 2005. The area was declared with regard to elevated levels of nitrogen dioxide arising from the proximity of the A500. In addition the Burnham Street area of Fenton was identified where the particulate (PM10) 24 hour mean objective would be exceeded more than 35 times a year, by the target date of December 2004 due to nearby industrial sources. Both areas were declared Air Quality Management Areas (AQMA) and Air Quality Action Plans (AQAP) were produced for each. The Action Plan is in place for the Fenton AQMA with work on-going to address the industrial sources of PM_{10}. Works arising from the Action Plan for the Cliff Vale (East) AQMA are nearing completion. During the second round of the review and assessment process, a further seven areas have been identified where	Air, Human Health Climatic Factors

Key Issues / Problems	Opportunities / Implications for LTP	SEA Topics
	the nitrogen dioxide annual mean objective is expected to be exceeded by the target date of December 2005. These breaches are almost entirely caused by traffic emissions. The areas affected are:- • Cobridge traffic lights • Burslem Town Centre • Bucknall New Road • Bucknall Bridge • Joiners Square • Victoria Place • Meir Centre It is likely that future monitoring of similar locations across the City will reveal more instances of excessive Nitrogen Dioxide levels. Action is now required to pursue improvements in those areas affected by poor air quality. A citywide Air Quality Management declaration is proposed to acknowledge the impact of transport on air quality in these seven areas and others which are likely to result from on-going monitoring. The declaration and action planning processes have been considered by the Council's Air Quality Management Strategy Group, which comprises practitioners from Consumer Protection, Planning, Housing, Transport, Highways and Legal Services from within the City Council plus representatives from RENEW, Staffordshire County Council, Newcastle-under-Lyme Borough Council, the Highways and Environment Agencies. The city wide AQMA addresses the strategic considerations above and enables the Action Plan to both address the general transport management issues detailed in the Local Transport Plan (LTP) and the more focused needs of the exceedance areas. Newcastle-under-Lyme Borough Council submitted its 2004 Progress Report in May 2005, and this was accepted by DEFRA. However, within the report concerns have been raised about particular sites within the borough regarding the levels of nitrogen dioxide. Although progression to a detailed assessment (declaration of an air quality management area) has not been necessary, there are geographical areas whereby further monitoring and investigation will be required due to potential future exceedences of the Air Quality Objectives. The LTP will need to contain a strategy to improve air quality, incorporating AQMAs and action plans.	
• **Protecting historic environments**	North Staffordshire has a rich archaeological heritage, stretching back to the prehistoric period. However, the area's unique character is largely the result of its more recent history and, in particular, its industrial development. The area's involvement in coal mining, iron working, brick and tile making, and pottery manufacture has had a major impact upon the landscape and the development of settlement, and has left behind a fascinating range of archaeological remains. Evidence for the most significant of these industries, pottery manufacture, survives above and below the ground in most areas in and around the historic town centres and is readily identifiable through archaeological	Cultural Heritage, Landscape

Key Issues / Problems	Opportunities / Implications for LTP	SEA Topics
	excavation. The area's archaeology is a finite and irreplaceable resource which should be preserved for the benefit of future generations. It is a major cultural asset which can contribute to both a sense of place and to future development. The Sites and Monuments Record (SMR) is a computer-based record of sites of archaeological interest and potential. Information is derived from excavations, maps, documentary evidence and antiquarian sources, and is constantly up-dated. It informs planning decisions and should be used when developing LTP schemes. The LTP area includes 17 Scheduled Ancient Monuments (SAMs) including: • The former Chatterley Whitfield Colliery • Etruria Mill • The Saxon Cross in Stoke • Lawn Farm at Berryhill • Hulton Abbey Transport proposals can have a potentially significant detrimental impact on the setting of SAMs and other nationally important archaeological remains. However, balanced against this is the need to ensure public access to such sites. Sensitively designed pedestrian and cycling routes would be the preferred option. Transport proposals affecting these or any new sites should be preceded by an archaeological assessment which can include desk-based research, evaluation including geophysics and which may lead to a full excavation or the undertaking of archaeological watching briefs. Preservation in situ should remain an option for sites deemed to be of National Importance. There are 30 designated Conservation Areas within the LTP area. The areas include: • The Villas, Stoke • Winton Square, Stoke • Penkhull Village • St. Peter Churchyard, Stoke • Burslem Town Centre • Blurton Church • Gladstone Pottery Museum, Longton • Ash Green, Trentham • Hartshill • St. Christopher Avenue, Penkull • Dresden • Albert Square, Fenton • Trent and Mersey Canal • Tower Square, Tunstall • Park Terrace, Tunstall • Short Street, Longton • Victoria Place, Fenton • Hitchman Street, Fenton • Newcastle Street, Middleport • Albion Square, Hanley • Caldon Canal • Hanley Park • Victoria Park, Tunstall	

Key Issues / Problems	Opportunities / Implications for LTP	SEA Topics
	There is a need to ensure that transport proposals are respectful of the historic environment, particularly in urban areas where creative approaches to traffic management and road widths plus a relaxation of signage, road marking and surface materials standards should be considered to ensure historic character and scale is not eroded. Proposals affecting such sites should be developed in consultation with the conservation specialists within the relevant environmental planning section. Furthermore schemes should be in accordance with the Streets for All: West Midlands guide. There are 425 Listed buildings in the North Staffordshire LTP area. These include: • The Gladstone Pottery Museum, Longton • The Wedgwood Institute, Burslem • Grade I listed Trentham Mausoleum • Stoke-on-Trent Railway Station • Longport Railway Station • Harecastle Tunnel Portals of the Trent and Mersey Canal • Canal and Roadside Mileposts There area also 5 registered parks/gardens: • Longton Park • Hanley Park • Burslem Park • Tunstall Park • Newcastle Park Information regarding the precise nature of the listings and the proportion of buildings at risk is held on the Staffordshire Historic Environment Record (SHER), which is maintained by SCC and the buildings at risk report maintained by SoTCC. These are available as layers on the Councils' Geographical Information Systems. Trentham Mausoleum is Stoke-on-Trent's only grade I listed building. Urgent repairs totalling in excess of £140,000 are currently being carried out funded by English Heritage and the corporate Heritage and Design Fund. The City Council has also helped to set up the North Staffordshire Architect Centre, Urban Vision, to promote high standards of design and conservation for the built environment which forms an important part of the historic environment. Transport proposals should not adversely affect historic structures and their settings, which include numerous mile markers and historic bridges – proposals affecting such sites should be developed in consultation with the conservation specialists within the relevant environmental planning sections. There is a need for full EA of any major transport schemes and the LTP should promote the protection of the historic environment, whether designated or non designated, and introduction of appropriate mitigation measures where necessary. In areas that are not afforded conservation area status or do not fall within the setting of a listed building the	

Key Issues / Problems	Opportunities / Implications for LTP	SEA Topics
	retention of traditional materials and highway features should be considered in order to preserve and enhance the historic environment. All environmental assets should be protected and enhanced.	
• **Protecting and enhancing natural environmental assets**	Land associated with the highway network can support a wide range of important habitats and species – road verges and adjoining hedges are frequently home to uncommon plants and animals. The biological sensitivity of individual land parcels across Staffordshire has been evaluated in terms of its biodiversity and the River Trent and its tributaries are particularly valuable. Biological water quality in North Staffordshire's rivers and canals is below average. Chemical water quality is in line with the national average for Staffordshire County Council but below average for Stoke on Trent. Promotion of measures such as de-culverting, channel enhancements and sustainable urban drainage systems (SUDS) as part of transport schemes could assist work to improve water quality. The LTP area falls within the Potteries and Churnet Valley Natural Area. This is an area of strong contrasts, with the sprawling conurbation of the Potteries sandwiched between the wild landscape of the uplands to the north; the sheltered, wooded valleys and pastures of the Churnet Valley to the south-east, and the rural landscape of the Staffordshire/Cheshire plain to the south and west. The industrial expansion in this area was powered by the underlying, mineral-rich geology of the Coal Measures and associated rocks, and the industrial heritage of the Potteries towns has left a characteristic mark on much of the landscape of the Natural Area. The area supports a wide range of habitats that are of wildlife value. Some individual habitats are important at a national level as reflected by their designation as Sites of Special Scientific Interest. However, all the habitats represented within the Natural Area play their part in supporting the overall biodiversity of the area. There are 4 Sites of Special Scientific Interest in North Staffordshire: • The **Ford Green Reed Bed** at the south end of Whitfield Valley Local Nature Reserve has been designated as a site of special scientific interest because large numbers of swallows gather here before leaving the country at the end of the summer. • **Wetley Moor** situated near the village of Werrington comprises one of the largest areas of lowland heathland remaining in Staffordshire. Dry heathland predominates on the higher, steeper slopes, whilst wet heath and small areas of mire occur on the lower, flatter ground. These wetland communities are more extensive than on any of the other lowland heathland sites in Staffordshire and are a particularly important	Biodiversity, Flora and Fauna, Landscape, Water, Soil

Key Issues / Problems	Opportunities / Implications for LTP	SEA Topics
	feature. The Moor also shows transitional characteristics between the true moorland of the adjacent Pennines and the low-lying heaths of the Cannock Chase area. • **Hulme Quarry** within Park Hall Country Park is designated for its geology. It is an important site for the study of the environmental conditions which occurred during the Triassic Period. • **Metallic Tileries** is a key site for British Carboniferous geology. It is the only known site in the North Staffordshire Coalfield showing the unconformable contact between the Etruria Formation red-beds and the black shales and sandstones of the Newcastle Formation (Middle Carboniferous). Local Nature Reserves have been declared at: • Hartshill Park • Berryhill Fields • Whitfield Valley • Bagnall Road Woods • Holden Lane Pools • Westport Lake The importance of protecting the visual quality of the landscape and townscape is also recognised – the County Council has published Supplementary Planning Guidance (SPG) entitled 'Planning for Landscape Change', which should be read in conjunction with the County's landscape quality mapping and landscape policy zones. This SPG addresses how the visual contribution of the landscape can be protected and enhanced through development proposals and is therefore of relevance to transport schemes and proposals. To protect and enhance townscape and vistas transport schemes should have consideration to relevant design guidance literature.	
• **Highway network condition** • **Highway maintenance**	Highway maintenance underpins all LTP strategies. Poor road and footway condition pose major problems for all travellers. Together with road safety, improvement of overall ride quality is perhaps the most important measure that can be taken to encourage more sustainable modes of transport as well as reducing vehicle noise. It also makes a major contribution to improving road safety and the quality of the overall streetscape. However current levels of capital and revenue expenditure are unlikely to be sufficient to clear the structural maintenance backlog by 2011. The introduction of a Transport Asset Management Plan will enable funding to be better targeted at areas of greatest need. Wherever possible, maintenance programmes need to be fully integrated with other programmes with appropriate initiatives such as cycle lanes, advanced stop lines, raised kerbing at bus stops, and anti-skid surfacing. When developing programmes for transport facilities to be introduced or improved proper account of the associated maintenance implications need to be included so that the true cost of providing and maintaining that infrastructure can be weighed against the associated benefits.	Material Assets

Key Issues / Problems	Opportunities / Implications for LTP	SEA Topics
• **Waste generation and disposal** • **Mineral extraction and usage**	National policy emphasises the need for waste to be minimised at source and increased priority to be placed on re-use and recycling of waste materials. Local policy seeks to ensure that the environmental impacts caused by minerals and waste operations and the transport of minerals and waste are kept, as far as possible, to an acceptable minimum. The majority of products are moved by road, in heavy goods vehicles. This has a significant impact on the condition of roads and there is a need to examine distribution patterns with the aim of transporting minerals and waste by rail or canal wherever possible. Although there is very little mineral extraction in North Staffordshire, a significant amount of minerals are used - in industry, construction and for a wide range of other purposes. The thrust of policy is towards increasing the amount of recycling. It is estimated, for instance, that around 48,000 tonnes of aggregate are recycled within Stoke-on-Trent each year. This has a significant impact both in terms of reducing the need for primary land won aggregates and also reduces the distance aggregates are transported.	Soil, Biodiversity, Flora and Fauna, Landscape, Material Assets, Human Health, Water
• **Road Safety**	Road accident casualties across North Staffordshire have declined significantly since records began. There has been a decline of 11% since the 1994/98 average baseline was established in the Government's road safety strategy (“Tomorrow's Roads Safer for Everyone”, DETR, 2000). This decrease in casualties is against a background increase in traffic levels across North Staffordshire and is also comparable to the national decrease of 12%. This is a result of the hard work of road safety officers and partners in North Staffordshire. However, in spite of this reduction, there were still over 1,800 people either injured or killed on roads across North Staffordshire during 2004 and this is clearly not acceptable. Analysis of all casualties in 2004 by mode of travel reveals that the majority (63%) of all accident casualties are car occupants and this reflects the higher levels of car usage by this mode. However, only 4% of car occupants are killed or seriously injured the majority of accidents involving cars tend to only results in slight injuries. When this is compared with the proportion of KSIs for the more vulnerable modes such as walking (12%), cycling (9%) and motorcycling (20%) it is clear that when these modes are involved in an accident they are more likely to fare much worse than a car occupant. This shows that priority needs to be given to identifying the location and causes of accidents involving vulnerable road users and to implement measures aimed at reducing them. Analysis of casualties in 2004 by age and gender across North Staffordshire shows that casualties are more likely to be male than female. The young adult age groups, particularly the 16 to 19, 20 to 29 and 30 to 39 year olds are the population groups with the highest rate of casualties per head of population.	Human Health, Population, Material Assets

Key Issues / Problems	Opportunities / Implications for LTP	SEA Topics
	Child casualties are relatively low compared with other age groups in North Staffordshire. However the National Road Safety Strategy had compared the UK's child casualty figures with corresponding figures in Europe and set targets for improvement. There is therefore a requirement to pay particular attention to this age group to meet national targets. In North Staffordshire there has been a gradual decline in the number of child killed and seriously injured casualties since 1994. Safety initiatives should continue to be developed and implemented across North Staffordshire. In order to target drivers and manage speed the Councils need to continue working with the Police on effective enforcement measures – including the use of safety cameras and the enforcement of drink drive, hand held communication devices and seat belt legislation.	
• **Depletion of non-renewable energy sources and increasing greenhouse gas emissions**	Transport is a key source of energy consumption and resultant CO_2 emissions. The North Staffordshire LTP congestion strategy should be aimed at tackling both of these issues by reducing travel distances and volumes of traffic. Measures will be aligned with the key regional priorities identified for investment, as set out in the Regional Transport Strategy. The policies and proposals within the LTP will also be key in supporting the development of transport infrastructure and encouraging modal shift towards more environmentally sustainable modes of transport that minimise the use of energy, particularly walking, cycling and public transport. Strategies of the LTP to tackle congestion and improve air quality will need to cut down fuel consumption by reducing the need to travel, improving the efficiency of the current road network.	Climatic Factors, Air, Landscape

PRELIMINARY CONCLUSIONS

6.3 The review indicates that there are a number of environmental issues in North Staffordshire that the LTP will not be able to address in isolation. Of the primary environmental concerns a large number have few direct transport implications or feasible transport related solutions (e.g. the protection and enhancement of all wildlife habitats). However the LTP should ensure that all possible opportunities to maintain and enhance the environmental baseline are taken.

7. ANALYSIS OF ALTERNATIVES

INTRODUCTION

7.1 The SEA Directive states that the Environmental Report should consider "*reasonable alternatives taking into account the objectives and geographical scope of the plan*" and should give "*an outline of the reasons for selecting the alternatives dealt with*".

7.2 DfT's guidance indicates that an initial assessment of 'strategic alternatives' should be completed at Stage B of the SEA process, as a means of further informing the scoping of ensuing stages of the assessment.

STRATEGIC ALTERNATIVES

7.3 DfT has provided detailed guidance on the approaches and methods that Highways Authorities should adopt in drawing up their second LTPs. Although the guidance is quite prescriptive in terms of the principles and priorities that should be adopted, there still remains scope to consider a range of different alternatives broadly consistent with the requirements of the guidance.

7.4 The North Staffordshire Integrated Transport Study (NSITS) was commissioned to undertake a comprehensive overview of transport and travel in North Staffordshire taking into account transport commitments and likely land use developments. A requirement of the study was to provide a thorough technical assessment of what strategic alternatives are realistic to tackle transport problems identified, and that support Government, regional and local transport aims and objectives. With guidance from the steering group and wider reference group the study has tested the case for and against the strategy component alternatives below. Examples of the schemes assessed are given as bullet points.

Improve Public Transport Services and Infrastructure

Service Improvements

- Increased bus service frequencies;
- New bus services;
- New Demand Responsive bus / taxi services;
- Park and Ride Services; and
- Increased train frequencies.

Infrastructure Improvements

- Bus priority;
- Guided bus;
- Park and Ride Sites;
- Interchange and Passenger Facilities;
- Light rail; and
- Heavy rail.

Encouragement of Walking and Cycling

- Improve existing facilities (crossings, etc);
- Provide new pedestrian / cycle networks;
- Provide cycle facilities at schools, work places, within town centres, at stations, etc; and
- Change attitudes through education.

Encourage Less Car Use

- Encourage car sharing:
  - Green Travel Plans; and
  - High Occupancy Vehicle Lanes.
- Reduce the Overall Need to Travel:
  - Internet Shopping; and
  - Teleconferencing, etc.

Increase Highway Capacity

- Control / regulate on-street parking;
- Improve junction capacities through selective improvements;
- Widen existing roads;
- Build local relief roads; and
- Build major new roads.

Increase the Cost of Car Use

- Increase long stay public car park charges;
- Increase short stay public car park charges;
- Reduce the supply of car parking spaces;
- Conversion of long stay parking to short stay (which could lead to increases in long stay prices);
- Impose a Work Place parking charge levy; and
- Impose Congestion Charges.

7.5 After assessing the effectiveness and feasibility of the alternative strategy components the study emphasises two key issues that need to be addressed in moving forward. These are:

- it needs to be accepted that it will be very difficult to improve the quality of many resident's lives without investing heavily in public transport; however,
- it also needs to be accepted that simply improving public transport, in isolation, is not a viable way forward because, although it may be acceptable to subsidise improved bus services in the short to medium term, it is not a sustainable solution for the longer term.

7.6 The study found that these issues leave two long term strategic alternatives:

- either it is accepted that improving public transport is not achievable and instead, reduce congestion, improve road safety and selectively reduce traffic noise and local air pollution through significantly increasing road capacity overall. This implies an acceptance that the population as a whole will have to buy or find access to a car if it wants to fully participate in society; **or**
- a strategy is adopted that accepts the longer term need to introduce congestion charging, with the improved transport offer being implemented during the early years and the more difficult issues being addressed once the offer has been improved and when it is likely that the current resistance to congestion charging will have been overcome.

7.7 NSITS recommends that the second option is the most realistic alternative, best meets the Government, regional and local transport objectives, and best tackles the issues the study identified. As part of this strategic approach NSITS identifies the following as key measures for the next 5 years:

- Improvements to bus services
- Improvements to bus infrastructure
- Develop park and ride at Etruria and Sideway
- Implement highway improvements and management that enhance public transport, environmental improvement, congestion, regeneration and road safety
- Measures to encourage walking
- Measures to encourage cycling
- Travel Planning and information
- Other measures including car parking controls and management, developer contributions to transport, support taxis, strengthen links with land use planning

7.8 Based on the advice from NSITS, for each of the North Staffordshire LTP aims various strategy options are considered in the provisional LTP, these are listed below. These are numbered below under the most relevant LTP aim. Due to the close nature of the accessibility, congestion and air quality aims, and the overlap of options that can achieve these aims, these have been grouped together. It should be noted that the achievement of each aim supports the achievement of the other aims. For example meeting the aims of improved accessibility, tackling congestion and better air quality have a significant impact on quality of life.

7.9 For completeness of the SEA, the option of significantly increasing overall road capacity is also included in this group. This gives two strategic alternatives for the accessibility, congestion and air quality strategies:

- Significantly increase overall road capacity, concentrating on options 4, 7 and 8 **or**
- An improved transport offer that could facilitate charging in the long term, concentrating on options 1, 2, 3, 4, 5, 6 and 7

7.10 All of the Strategy Options for the travel safety, supporting regeneration and the local economy, maintenance, and quality of life aims may need to be selected to achieve these aims, it will rarely be a case of ‘either / or’. Different prioritisation of these options in the 5 year implementation plan of the LTP gives a range of strategic alternatives. For example one strategic alternative for the travel safety aim strategy would be to prioritise (10) Safer Routes to School projects over (11) local safety schemes.

Strategy Options

A. Improve accessibility for all

B. Tackle congestion

C. Better air quality

1. Improve the conditions for and providing alternative travel to the car
2. Encouraging smarter travel
3. Fiscal Demand Management Measures
4. Better Management of the Existing Network
5. Better integration of land use and transport planning
6. Providing new infrastructure without increasing overall capacity
7. Incident management
8. Significantly increase overall road capacity

D. Improve travel safety

9. Education
10. Safer Routes to School projects
11. Local safety schemes
12. Enforcement and promotion of traffic law and road safety messages
13. Maintenance and expansion of CCTV systems
14. Improved street lighting
15. Improved public transport waiting areas
16. Alley-gating in areas of terraced housing

E. Support regeneration and the local economy

17. Partnership work with Renew North Staffordshire
18. New development provides transport investment
19. Deliver transport and regeneration investment together

F. Cost effective maintenance and management of the transport system

20. Maintain and preserve the highway network and ensure full and safe use by all permitted vehicular traffic
21. Assist the delivery of sustainable transport infrastructure in maintenance schemes
22. Support the road hierarchy by identifying the routes carrying the highest volumes of traffic and pedestrians
23. The use of maintenance funds alongside local safety scheme expenditure

G. Enhance Quality of Life

24. Improved quality of public open spaces
25. Conserved or enhanced landscape quality
26. High quality urban street environment

ASSESSMENT OF ALTERNATIVES

7.11 Table 7.1 provides an initial assessment of the options that make up the different strategic alternatives for the LTP. A 'without plan' alternative is also assessed for each group of aims or aim has also been included. This 'without plan' alternative gives a control, showing the effect on the baseline without the plan. Examples of schemes are given for options where appropriate. It is the options that are being assessed rather than the different examples. This reflects the level of detail given in the LTP given the strategic nature of the plan. Each option that makes up the alternatives is given an assessment of a positive effect (**+**), no clear effect (**=**) or negative effect (**-**) on the SEA objectives set out in the previous chapter:

SEA Objectives

1 – To maintain and improve local air quality
2 – To improve the quality of ground and surface waters
3 – To respond to climate change through reduced greenhouse gas emissions
4 – To conserve and enhance wildlife habitats and species
5 – To encourage better use of land and conserve soil resources and quality
6 – To conserve and enhance the natural historic environment and landscape quality
7 - To protect and enhance buildings, features and areas of historic, archaeological or cultural value, and their settings
8 – To reduce road traffic and congestion
9 – To promote more sustainable modes of transport
10 – To improve health and reduce health inequalities
11 – To promote safe communities, reduce crime and the fear of crime
12 – To improve access to jobs and services
13 – To support regeneration of deprived areas
14 – To support sustainable economic growth

TABLE 7.1: ASSESSMENT OF STRATEGY OPTIONS

Key to symbols

+ Overall positive effect - Overall negative effect = No clear effect

Strategy Options	Example measures of option / *Outcomes without plan*	SEA Objective													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
A Improve accessibility for all															
B Tackle congestion															
C Better air quality															
without plan	*Continued increase in car dependency with traffic growth undermining public transport efficiency and viability, growing modal share for private car, increasing congestion and associated social, economic and pollution problems, reduced accessibility for all.*	-	-	-	=	-	=	-	-	-	-	-	-	-	-
1. Improve the conditions for and providing alternative travel to the car	Improving public transport priority, reliability, availability & integration Improving physical accessibility for public transport users Reducing the cost of travel Improving provision for walking and cycling Addressing crime and personal security	+	+	+	=	=	+	+	+	+	+	=	+	+	+

Strategy Options	Example measures of option / Outcomes without plan	SEA Objective													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
2. Encouraging smarter travel	Travel information Travel campaigns e.g. car sharing Travel plans	+	=	+	=	=	=	=	+	+	+	+	+	+	+
3. Fiscal demand management measures	Parking charges	+	=	+	=	=	+	+	+	+	=	=	=	=	=
4. Better Management of the Existing Network	Traffic management	+	+	+	=	=	=	+	+	+	+	=	+	=	+
5. Better integration of land use and transport planning	Accessibility planning in development control, and service provision Developer contributions to local transport provision	+	+	+	=	+	+	+	+	+	+	+	+	+	+
6. Providing new infrastructure without increasing overall road capacity	Park and ride Localised highway improvements	+	=	=	-	=	-	=	+	+	+	+	+	+	+
7. Incident management	Road and streetwork management Traveller Information on incidents	+	+	+	=	=	=	=	+	+	=	=	+	=	+
8. Significantly increase overall road capacity	Major highway improvements	=	-	-	-	-	-	-	=	-	-	=	+	=	=

Strategy Options	Example measures of option / *Outcomes without plan*	SEA Objective													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
D Improve travel safety															
without plan	*Improvements to vehicle design will mitigate the occurrence and severity of accidents from increased traffic levels. Fear of crime would increase without actions to improve personal security, undermining the attractiveness of sustainable transport modes*	=	=	=	=	=	=	=	=	-	-	-	-	-	-
9. Education	Pedestrian training Adult and child cycle training Safe driving education	+	=	=	=	=	=	=	+	+	+	+	+	+	+
10. Safer Routes to School projects	School cycle parking New or improved cycle/footpaths Safety schemes around schools	+	=	+	=	=	=	=	+	+	+	+	+	+	+
11. Local Safety Schemes	Traffic calming Safety audits of highway schemes Anti-skid surfacing	+	=	=	=	=	=	+	=	+	+	+	=	=	=
12. Enforcement and promotion of traffic law and road safety messages	Speed management Support for national road safety campaigns Partnership work with Police and Fire and Rescue Service	+	=	=	=	=	=	=	=	+	+	+	=	=	=
13. Maintenance and expansion of CCTV system	More CCTV sites Operation of CCTV system	=	=	=	=	=	=	=	=	+	=	+	=	=	=

Strategy Options	Example measures of option / *Outcomes without plan*	SEA Objective													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
14. Improved street lighting	Street lighting PFI Additional lighting schemes	=	=	=	=	=	=	+	=	+	=	+	=	=	+
15. Improved public transport waiting areas	Bus station improvements Bus stop improvements	=	=	=	=	=	=	=	=	+	=	+	=	=	+
16. Alley-gating in areas of terraced housing	Gating of back-alleys that suffer from anti-social problems	=	=	=	=	=	=	+	=	+	+	+	=	+	+
E Support regeneration and the local economy															
without plan	*Undermining of regeneration efforts and housing market intervention. Increasing congestion and worsening accessibility stifle sustainable and inclusive economic growth. Reduced viability of sustainable communities in North Staffordshire.*	-	=	-	=	-	-	=	-	-	-	-	-	-	-
17. Partnership work with Renew North Staffordshire	Dovetailing Renew and LTP interventions	+	=	+	=	+	+	=	+	+	+	+	+	+	+
18. New development provides transport investment	Seeking appropriate contributions to local transport from development	+	=	+	=	+	=	=	+	+	+	+	+	+	+
19. Deliver transport and regeneration investment together	Dovetailing LTP and Regeneration Zone investment	+	=	+	=	+	+	+	+	+	+	+	+	+	+

Strategy Options	Example measures of option / *Outcomes without plan*	SEA Objective													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
F Cost effective maintenance and management of the transport system															
without plan	*Deterioration of transport infrastructure, causing serious accessibility, congestion, safety, air quality, noise and air quality problems. These problems together with the visual impact of poorly maintained transport infrastructure would undermine regeneration efforts and the economy.*	-	=	-	=	=	-	-	-	-	-	-	-	-	-
20. Maintain and preserve the highway network and ensure full and safe use by all permitted vehicular traffic	Carrying out structural maintenance works at the correct time	+	=	+	=	+	+	+	+	+	+	+	+	+	+
21. Assist the delivery of sustainable transport infrastructure in maintenance schemes	Provide bus infrastructure in maintenance schemes Provide cycling infrastructure in maintenance schemes Provide pedestrian infrastructure in maintenance schemes	+	=	+	=	+	+	+	+	+	+	+	+	+	+
22. Support the road hierarchy by identifying the routes carrying the highest volumes of traffic and pedestrians	Carrying out structural maintenance works on routes heavily used by traffic and pedestrians	+	=	+	=	+	+	=	+	+	+	=	+	+	+
23. The use of maintenance funds alongside local safety scheme expenditure	Combining maintenance and local safety schemes such as traffic calming or anti-skid surfacing together	+	=	=	=	+	+	+	+	+	+	+	=	=	=

Strategy Options	Example measures of option / *Outcomes without plan*	SEA Objective													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
G Enhance Quality of Life															
without plan	*Continued increase of negative impacts of motorised transport, such as poor air quality and excessive noise. Decreasing attractiveness of walking and cycling reducing opportunities for physical activity. Stress and social exclusion from increased congestion and accessibility problems. Negative impact on landscape and biodiversity.*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24. Improved quality of public open spaces	Improved walking/cycling environment through open spaces	=	=	=	=	+	+	+	+	+	+	+	+	+	+
25. Conserved or enhanced landscape quality	Maintaining or enhancing landscape quality as part of LTP schemes	=	+	=	+	+	+	+	=	+	=	+	=	+	=
26. High quality urban street environment	Streetscape and public realm works as part of LTP schemes	+	=	=	=	=	+	+	=	+	+	+	=	+	+

7.12 Table 7.1 above sets out an initial assessment of the strategy options, grouped by most appropriate LTP aim. A 'without plan' alternative is also assessed for each aim. The following paragraphs provide a brief commentary on the results.

A Improve accessibility for all, B Tackle congestion and C Better air quality

7.13 The strategy options for these three aims were assessed together due to the large amount of overlap between the options. Options 1-8 were assessed, which encompass the two strategic alternatives the North Staffordshire Integrated Transport Study posed:

- Significantly increase overall road capacity – strategy options 4, 7 and 8
  or
- An improved transport offer that could facilitate road charging in the long term - strategy options 1, 2, 3, 4, 5, 6 and 7.

7.14 Significantly increasing overall road capacity, for example by building major new roads, is assessed as having a negative effect on over half of the SEA objectives. The only positive impact is on access to jobs and services. This is consistent with the conclusion of NSITS that building major new roads above those committed would have an unacceptable effect on the environment. The strategy options that make up the strategy alternative that moves towards road user charging in the longer term, by improving the transport offer and encouraging smarter travel, shows a positive effect on most of the SEA objectives. The only option in this strategy alternative that has any negative effects is providing new infrastructure. New infrastructure such as park and ride and local highway improvements are assessed as having a negative effect on SEA objectives 4 and 6. If these options were to be pursued mitigation measures would need to be explored for negative effects on wildlife habitats and species or landscape quality.

7.15 An assessment of a 'without plan' alternative is presented for these aims. This shows that the NSITS prediction of a continued increase in traffic and car dependency undermining the viability of alternatives and causing problems of increasing congestion, reduced accessibility and associated economic, social and pollution problems, would have negative effects on most of the SEA objectives.

D Improve Travel Safety

7.16 Strategy options 9-16 and a 'without plan' option were assessed for this aim. The assessment of the 'without plan' option shows a negative impact on the SEA objectives 9-14 mainly due to increasing fear of crime. The road safety and personal security improvements strategy options 9-16 are assessed as having an overall positive effect on some or all of these objectives, with no negative effects on any SEA objectives. Improved attractiveness of alternative modes to the car and more responsible driving as a result of options 9-12 also have a positive effect on the local air quality SEA objective.

E Support regeneration and the local economy

7.17 The assessment of the 'without plan' option for this aim shows a negative effect on most of the SEA objectives. This is due to the undermining of the creation of sustainable communities without local transport improvements to support regeneration. Options 17, 18 and 19 are assessed as having an overall positive effect on most of the SEA objectives.

F Cost effective maintenance and management of the transport system

7.18 The 'without plan' option is assessed as having a negative effect for most of the SEA objectives as lack of maintenance and management of the transport system would have serious problems for the other aims. None of the strategy options to achieve the aim are assessed as having an overall negative effect on the SEA objectives. Strategy options 20 to maintain and preserve the highway network and 21 assisting the delivery of sustainable transport infrastructure in maintenance schemes are assessed as having a positive effect on most of the SEA objectives. Strategy options 22 and 23 also are assessed as having an overall positive effect on many of the SEA objectives.

G Enhance Quality of Life

7.19 The assessment for the 'without plan' option for this aim is an overall negative effect on all of the SEA objectives. To achieve this aim all the other aims need to contribute plus also the options specific to this aim seek to improve the quality of the environment, such as to open space and streetscape, in order to enhance quality of life. None of the options are assessed as having an overall negative effect on any of the SEA objectives. The strategy options 24, and 26 are improvements to open spaces and street environments in North Staffordshire. These strategy options are assessed as having a positive impact on many of the SEA objectives. Strategy option 25 is to conserve or enhance landscape quality, for example as part of LTP schemes, this is assessed as having a positive impact on SEA objective 4 to conserve and enhance wildlife habitats and species. None of the other strategy options are assessed as having an overall positive effect on this objective. Strategy option 6 has an overall negative effect on SEA objective 4.

8. ASSESSMENT OF SIGNIFICANT EFFECTS

INTRODUCTION

8.1 The SEA Directive states that in the Environmental Report:

'the likely significant effects on the environment of implementing the plan or programme….and reasonable alternatives….are [to be] identified, described and evaluated' (Article 5.1). The Environmental Report should include information that may *'reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme [and] its stage in the decision-making process'* (Article 5.2).

8.2 In addition the SEA Directive requires the Environmental Report to outline measures to prevent, reduce and as fully possible offset any significant adverse effects on the environment of implementing the plan or programme (Annex I (g)).

8.3 North Staffordshire LTP policy components will be assessed in a general broad-brush and qualitative manner as quantitative predictions are not always available. A broad qualitative prediction of effects corresponds to the strategic level of the LTP and the detail level of the data. Examples of the prediction and evaluation techniques for assessing significance of effects include expert judgement, dialogue with stakeholders and public participation, geographical information systems, reference to legislation and regulations and environmental capacity.

8.4 This section outlines the main proposals, measures and schemes being developed for the North Staffordshire Local Transport Plan that have been assessed as part of Stage C of the SEA process, together with the methodology that has been used for the assessment of significant effects. For the purpose of the environmental assessment, similar schemes, proposals and measures have been grouped into 'components'. This avoids duplication that would arise were the assessment undertaken by grouping schemes, proposals and measures under the shared and local priorities under which the LTP strategies are structured.

NORTH STAFFORDSHIRE LTP COMPONENTS ASSESSED

8.5 Table 8.1 describes the main components that are proposed for implementation through the North Staffordshire LTP, following the assessment of strategic alternatives as described in Section 7. The LTP includes proposals, measures and schemes that are due to take place within the timeframe of the North Staffordshire LTP (2006/07 and 2010/11), and those that are proposed to take place beyond 2011, although the timing of the implementation of these programmes is dependent on levels of funding that are subject to change. The proposed timetable for implementation of the components is given in the third column. Although this is the first Local Transport Plan covering the whole of the North Staffordshire area, it is the second round of Local Transport Plans. Therefore the North Staffordshire LTP 2006/07-2010/11 is referred to as LTP2, with the subsequent 5 year LTP being LTP3 period, then LTP4 and so on.

TABLE 8.1: NORTH STAFFORDSHIRE LTP COMPONENTS ASSESSED

Component	Description	Proposed Timetable
1. Public Transport	The North Staffordshire Bus Strategy reflects the important role of public transport within the NSLTP and a range of public transport support measures feature in both the Accessibility and Congestion strategies. The aim is to provide a viable alternative to the car and achieve modal change. The following keynote measures are proposed within the Bus Strategy. • Improved bus reliability along key Quality Bus Corridors; • Increased accessibility to popular destinations; • Increased service frequencies on popular routes; • Improved accessibility to bus stops in terms of personal security, safety and reductions in walking distances; • Improvements to bus interchanges and waiting infrastructure; • Use of quality, low-floor buses throughout the network; • Introduction of Real Time Passenger Information; • Introduction of multi-operator ticketing; • Enhanced travel information provision.	Within the LTP2 timeframe and beyond
2. Park and Ride System	A key part of the Congestion Strategy. Parking in the following areas with express bus services to the City Centre, Newcastle Town Centre, Stoke upon Trent Town Centre, Stoke-on-Trent Rail Station and University Hospital North Staffordshire: 1. Etruria – Etruria Valley (northern part of former steelworks brownfield redevelopment) 2. A50/A500 junction Sideway (Trentham Lakes / Radial Park brownfield redevelopment sites) 3. Chatterley Valley brownfield redevelopment site 4. Bucknall area (no sites identified)	medium to long term, potentially beyond the LTP2 timeframe
3. Cycling and Walking	Providing viable and sustainable alternatives to the car is an important part of the Accessibility, Congestion and Air Quality Strategies of NSLTP. Walking and cycling strategies are being developed and will be supported by other initiatives such as Greening for Growth. The key NSLTP measures to benefit walkers and cyclists include: • Completing the National Cycle network within North Staffordshire; • Providing a supporting network of both on-road and off-road cycle routes; • Safer routes to school projects; • New or enhanced road crossings (all with either audible signal or tactile	Within the LTP2 timeframe and beyond

	device); • Cycle Parking at key public destinations; • New signage for cycle routes; • Signs for pedestrian routes; • Improved footways and surfaces; • Dropped crossings to help the mobility impaired, blind and partially sighted; • Development of new walking and cycling strategies for North Staffordshire; • Implementing the County and City Right of Way Improvement Plans (RoWIP) to help increase accessibility to local destinations.	
4. Integrated Spatial and Transport Planning	This will support both the Accessibility and Congestion Strategies by minimising new traffic generation and increasing access to jobs and services. Measures include: • Using transport modelling and accessibility planning techniques to inform the development of the Local Development Frameworks; • Producing a series of local strategies and Area Action Plans which will be specifically designed to take account of planned development; • Identify measures to reduce the need to travel; • Set out appropriate cost sharing between public and private bodies involved in development.	Within the LTP2 timeframe and beyond
5. Promotion of Smarter Travel	The promotion and encouragement of sustainable travel is an important element of the Congestion and Air Quality strategies and will be conducted under the TravelWise branding. Measures include: • Providing better and easier to access travel information on all modes; • Promotion of alternative forms of travel to the car such as the bus, train, bicycle, motorcycle, and walking; • Raising awareness of transport issues; • Developing travel plans for schools, workplaces, and hospitals; • Promoting the Staffordshire and Stoke-on-Trent Share-a-Lift scheme.	Within the LTP2 timeframe and beyond
6. Creating a better managed transport network	The NSLTP highlights better network management as a key component of the Congestion Strategy. The benefits are more reliable bus services, smoother flowing traffic and reduced traffic emissions. Key measures include: • Appointment of a Traffic Manager for Stoke-on-Trent to coordinate network management activities; • The use of urban traffic control to manage operation of signal controlled	Within the LTP2 timeframe

	junctions and create "green waves" for buses and emergency vehicles; • The use of improved technology including Variable Message Signs (VMS) and System for Urban Management and Information Transmission (SUMIT) to provide information and respond to incidents (crashes, major events and unplanned incidents) in order to keep motorists informed and maintain traffic flow; • Employing traditional traffic management techniques including one-way systems, banned right turns, bus and cycle lanes etc. to improve network efficiency; • Improvements in junction efficiency at key junctions on the Quality Bus Corridor network and where air quality is an issue; • Co-ordinated street works, which comprises the co-ordination of activity between utility companies and maintenance works in order to reduce disruption for all road users.	
7. Managing travel demand and car parking	This element of the Congestion Strategy aims to reverse the car dependency cycle and reduce unnecessary car traffic. Actions identified include the following: • Continued application of Decriminalised Parking Enforcement in Stoke-on-Trent and its introduction into Newcastle; • A review of car parking policies within the Local Development Framework; • A review of car parking charges across North Staffordshire; • An investigation of establishing a congestion charging or a road charging scheme in the longer term.	long term – probably within LTP4 timeframe
8. New transport infrastructure	The Congestion Strategy of NSLTP will require some new infrastructure to create space for: • Improved junction capacity and local highway improvements; • Quality Bus Corridors, that will generate improved journey time reliability for buses and reduced traffic emissions; • Park and Ride services; • New bus station in the City Centre; Much of this new transport infrastructure is likely to be on brownfield land due to the urban location.	LTP2 and LTP3 timeframe
9. Road Safety - softer measures	As part of the NSLTP Road Safety Strategy to reduce accidents, the City and County Councils both deliver a range of education and training programmes in schools and community/training venues across the County, including: • Pedestrian and cycling training in schools including Kerbcraft and bike to basics; • Stage-based road safety programme for schools comprising 'Starting-Out'; 'Stepping-Out'; and Walking Buses; • Pre-driver education delivered in partnership with the Police; • Working with community safety partners;	Within the LTP2 timeframe

	• Administering a Staffordshire wide pass-plus scheme for young drivers; • Developing a Managing Occupational Road Risk policy to roll out to businesses.	
10. Road Safety – physical and safety enforcement measures	The Road Safety Strategy of NSLTP also seeks to reduce accidents by engineering and enforcement measures. Both Councils will continue to work with partners to achieve their road safety objectives. Key measure include: • The Staffordshire Casualty Reduction Partnership will continue to work on speed enforcement in known problem areas; • The Councils will work with the Police on enforcement of seat belt wearing; • Local Safety Schemes will be supported in the LTP2; • Traffic calming and speed interactive signs will be installed; • Speed awareness course and National Driver Improvement course offered as an alternative to prosecution; • The programme of wet road site improvement, anti-skid surfacing and premium surface dressing will continue.	Within the LTP2 timeframe
11. Looking after the transport network	Maintaining the transport network is an important component in itself and supports the Congestion Strategy by reducing the need for disruptive major highway maintenance. Over the timeframe of the North Staffordshire LTP: • investment will be made into the continuation of the established programme of preventative maintenance across Stoke-on-Trent including both roads and bridges. In addition, a Transport Asset Management Plan (TAMP) will be submitted which will: • ensure that transport assets including roads, footpaths, and cycle paths are well maintained; • include the management of transport assets with historic interest.	Within the LTP2 timeframe

ASSESSMENT METHODOLOGY

8.6 The Strategic Environmental Assessment considers the effect of transport at the strategic plan level therefore the adopted assessment methodology reflects this large scale assessment. The assessment is generally qualitative and takes into account the level of uncertainty associated with the component details and the environmental data.

8.7 It is important to recognise that uncertainties can build up throughout the assessment process when slightly imperfect data is used to predict future baselines and then evaluate the impact transport measures may have. This uncertainty is taken into account when considering the development of mitigation measures and highlights the importance of the monitoring regime.

8.8 A detailed assessment was conducted for each North Staffordshire LTP component (Table 8.1) using assessment tables and then the cumulative and synergistic effects were considered using this analysis as the basis along with policy documents for other subject areas.

Prediction of Effects

8.9 Using the baseline data and the predicted future without plan baselines in the short and long term (Section 5), the environmental effects of the plan have been predicted. Formally, this assessment covers the same time period as the North Staffordshire LTP (2006/07 – 2010/11). However, the SEA Directive requires assessment of long term and cumulative and synergistic effects. This requires consideration of time scales that, in some cases, may extend well beyond the period of the North Staffordshire LTP. Effects were predicted for the short term and long term future and within that whether the impacts would be temporary or permanent. The short term future is defined as within the next 5 years which is the plan length and the long term future is the next 5 to 15 years.

8.10 A five point scale was used to show how beneficial or adverse the impacts are likely to be. The scale ranges from largely beneficial through neutral/uncertain impacts to largely adverse. The following scoring scales were used to characterise the various features of the predicted effects.

Effects:

Large Beneficial	**++**	**Temporary**	T
Slight Beneficial	**+**	**Permanent**	P
Neutral/ Uncertain	**0**		
Slight Adverse	**-**		
Large Adverse	**- -**		

8.11 A component characterised as having largely beneficial effects is likely to result in substantial progress being made towards the SEA objective. Slightly beneficial effects are likely to result in limited progress being made towards the SEA objective. In terms of adverse impacts, slightly adverse impacts have a limited detrimental effect on achieving the SEA objective and largely adverse effects will have a substantial detrimental effect on achieving the SEA objective.

8.12 A discussion of the impact that components will have over the next 15 years is included in the text along with an indication of the geographical scale of the impact. Issues surrounding data quality and uncertainty are also highlighted.

Mitigation of Adverse Effects

8.13 Where adverse environmental impacts have been identified mitigation measures have been developed to reduce or remove completely this negative impact. Mitigation in the broader sense will also be used to enhance the environment and help to enhance beneficial impacts that have been identified. Proposed mitigation measures are outlined in Section 9.

Monitoring Regime

8.14 Monitoring will be undertaken on a regular basis to ensure that the mitigation measures are having the desired effect and to monitor the implementation of the plan to check for any unforeseen adverse impacts.

8.15 Indicators used in the monitoring regime should enable the establishment of a causal link between the implementation of the plan and the likely significant effect (beneficial or adverse) being monitored. This helps to ensure that any adverse impacts that occur during implementation can be identified and that appropriate action can be taken by both Councils. The proposed monitoring regime is considered in more detail in Section 10.

ASSUMPTIONS AND RATIONALE FOR ASSESSMENT

8.16 The assessment undertaken relies heavily on professional judgement, which necessarily has an element of subjectivity. It also relies on certain assumptions about critical cause-effect relationships, changes to people's behaviour as a result of the components being assessed, the way development will be implemented and the way it will be influenced by other plans and programmes prepared separately.

8.17 The short term and long term future baseline predictions for the environment without the implementation of the North Staffordshire LTP have been used as the basis for the assessment. The assessment looks at how the implementation of the component will affect the short term and long term future baseline. The future baselines are shown in Section 5 - The likely evolution of the environment without implementation of the plan.

8.18 The assessment of the schemes and measures proposed to be implemented through the North Staffordshire LTP has been undertaken taking into account a series of general considerations. These include basic general assumptions arising from accepted correlations and relationships, as detailed below, together with more specific assumptions related to the SEA Objectives, which are set out in Table 8.2.

General Assumptions

- **reductions in volume of motorised transport** will have beneficial sustainability impacts in terms of reduced GHG emissions; improved road safety; improved local air quality; reduced water pollutants arising from run-off; benefits for flora and fauna arising from reduced pollutants, road kill and habitat severance; enhanced landscape quality; reduction in adverse impacts on historically sensitive environments; and indirect health benefits;
- **construction works** associated with major schemes and/or general infrastructure development will have some temporary localised disbenefits in terms of air quality (through pollution from particulates and works traffic), noise and vibration; increased localised congestion associated with construction traffic and temporary roadworks/diversions; detrimental impact on environment and landscape quality; and potential disruption to established habitats, flora and fauna;

- **enhanced walking and cycling access** is linked to a slowing of traffic growth rates, primarily restricted to modal shift for short journeys; health benefits in terms of healthier lifestyle choices and improved access to health services; reduced parking pressures in town and district centres, with potential economic benefits in terms of competitiveness; reduced GHG emissions through reductions in vehicle volumes; enhanced perceptions of safety as streets/routes become busier/more trafficked; and general benefits to environmental quality, flora and fauna;
- **increased public transport patronage** is associated with the following: limited improvements to local air quality with associated health benefits in terms of respiratory illnesses; limited improvements to water quality arising from reduction in vehicle volumes; reductions in overall GHG emissions; slowed growth rate of private transport usage; improved road safety resulting from a reduction in vehicles and use of the network by professionally trained drivers; general benefits for flora and fauna arising from reduced emissions and more energy efficient use of existing transport network; and environment/landscape impacts based on a balance of reduced vehicles against requirement for public transport infrastructure (signage, road lining, bus stops/shelter, lighting and information provision);
- **increased road network capacity** is assumed to attract additional road traffic movements both in terms of private transport and freight movements and, as such, is associated with the following: short term reductions in congestion and improvements to air quality, offset in the long term by increased traffic volumes, increased GHG emissions, more acute congestion problems, health disbenefits and reductions in local air quality. General increases in traffic flow are also linked to detrimental impacts on road safety (through increased volume of traffic movements) and flora and fauna (primarily through increased pollutants, road kill and habitat severance);
- **the development of new transport infrastructure** is linked to the following: in the case of greenfield – detrimental impact on countryside and landscape through permanent loss; in the case of brownfield redevelopment – the more efficient use of land and soil resources; in all cases, potential worsening of water quality through increased hard surfacing, which increases run-off and therefore flood risk. In the longer term, it is assumed that (irrespective of potential mitigation) requirements to adhere to planning policy will result in high quality design and landscaping, with environmental benefits;
- **development in the vicinity of watercourses** is assumed to give rise to increased flood risk; increased potential for pollution of ground and surface waters; habitat disturbance during and temporarily following construction; and in many cases, detrimental impact upon sensitive/historic environments.

Table 8.2 – Assessment Rationale for each SEA Objective

SEA Objective	Assessment Rationale
1. To maintain and improve local air quality	Positive correlation between improvements in air quality, health improvements and the use of more sustainable modes of transport. Consideration of whether schemes would result in reductions or increases in traffic-derived pollutant concentrations/carbon dioxide emissions through examination of predicted changes in road traffic numbers and the effect on the concentrations of certain traffic derived pollutants ($N0_2$ and PM_{10}). Such improvements would arise primarily from reduced volume of motorised road traffic (i.e. through modal shift to more sustainable modes), improved traffic flow and reduced congestion, with impacts being more acute in built up areas where air circulation is restricted.
2. To improve the quality of ground and surface waters	The degree to which the proposed components impact on water resources such as through increased run-off (i.e. as a result of increased hard surfacing), increases in potential sources of pollution arising from traffic growth, proposals involving construction within watercourses (i.e. bridges) and potential for pollution incidents, particularly during construction. Impacts are likely to be more pronounced in the vicinity of open watercourses.
3. To respond to climate change through reduced greenhouse gas (GHG) emissions	Considered as a regional/national level effect, comprising an assessment of the degree to which the proposed components will contribute to an increase or decrease in GHG emissions. In this context, the principal causal relationship is a positive correlation between increased traffic volumes and increased GHG emissions. Measures to promote the use of more sustainable transport modes would therefore be considered of benefit in terms of reducing GHG emissions. In addition, overall carbon sink potential would be affected by changes to woodland, with increased woodland cover being of benefit in terms of reducing overall GHG levels.
4. To conserve and enhance wildlife habitats and species	The degree to which the components result in the conservation, enhancement or creation of habitats, considering the condition of SSSI, the extent of net gain in wildlife interest through creation of habitats and taking into account increased landscape maturity over time. Habitat severance and negative impacts of flora and fauna are associated with increased traffic volumes, speeds, salting and gritting activities and levels of emissions. Construction of roads/routes/parking etc. on undeveloped and/or greenfield sites in particular would also result in disturbance to established habitats.
5. To encourage better use of land and conserve soil resources and quality	The degree to which proposed components utilise sustainable resources through sustainable construction, reuse or recycling of waste. Includes a consideration of the components' contribution to reduce the demand to develop greenfield sites, which would include a beneficial impact arising from more efficient use of existing transport infrastructure.

SEA Objective	Assessment Rationale
6. To conserve and enhance the natural historic environment and landscape quality	Impact of the proposed components on both local townscape and distinctiveness (including Conservation Areas), and wider landscape and historic environment quality, either positively or negatively, particularly during construction. Extent of sympathetic integration of proposals, including the longer term impact of maturing landscaping as well as the potential intrusion of components on the landscape for example through the cumulative effects of traffic management and/or public transport infrastructure installation (i.e. signage, lighting, shelters, information points, speed humps/chicanes, parking arrangements etc.).
7. To protect buildings and sites of archaeological cultural and historic value and their settings	Impact on designated Conservation Areas, listed buildings, locally listed buildings, scheduled ancient monuments, other nationally important archaeological remains, registered parks and gardens and battlefields, particularly during construction. Extent of sympathetic integration of schemes and measures, impact of air pollutants, noise and vibration as well as consideration of the cumulative impact of incremental changes to the physical environment, particularly in the setting of sensitive sites/buildings.
8. To reduce traffic and congestion	Impact of the component on reducing congestion on the North Staffordshire network and to slow the rate of traffic growth that contributes to that congestion. Congestion is considered in a broader sense than just traffic growth as localised congestion may be because of road accidents and maintenance to the highway. Initiatives to encourage modal shift to sustainable modes likely to be most effective in supporting this objective. Demand restraint is also an important contributor to slowing the rate of road traffic growth. Demand restraint initiatives to improve network flow; works to increase network/junction capacity; and improvements targeted at improving road safety should all make a positive contribution to reducing congestion.
9. To promote more sustainable modes of transport	Impact of the components on supporting the development of infrastructure for sustainable transport modes (walking, cycling, bus, rail) and identification of components that actively ‘promote’ these modes with a view to increasing use of sustainable modes as opposed to private transport.
10. To improve health and reduce health inequalities	Consideration of schemes and measures that would encourage some form of physical activity, which may have a knock on effect on improving health. Improvements to the pedestrian environment or cycle provision, as well as measures that improve access to key health services through development of sustainable transport choices. Schemes which result in reductions in air and noise pollution and reduce congestion (which can cause stress).
11. To promote safe communities, reduce crime and the fear of crime	Consideration of the contribution of components to improving road safety for all users, as well as enhancing safety and security for walkers, cyclists and public transport users through increased lighting/CCTV/security measures/safety by design etc. Important to identify proposals that can improve ‘perceptions’ of safety as well as actual improvements.
12. To improve access to jobs and services	Impact of components on improving access to and between main services and residential areas for all modes. This includes a consideration of extended frequencies and broader transport networks, as well as the integration of transportation planning with development proposals.

SEA Objective	Assessment Rationale
13. To support regeneration of deprived areas	The degree to which components support the development both of existing areas and new development through the provision of sustainable transport infrastructure and strengthening of linkages across North Staffordshire. Includes a consideration of measures that could help to improve image through enhanced housing and quality of local environment.
14. To support sustainable economic growth	Considers the way in which components help to support economic growth in a variety of different ways – enhanced access for all modes; development of infrastructure to support regeneration in North Staffordshire; measures to safeguard the health of the workforce; and enhancement of the landscape and townscape to support investment. In this context it is important to adopt a balanced approach to assessment – sustainable economic growth should not result in environmental and/or social trade offs that could be considered to outweigh economic benefits.

ASSESSMENT RESULTS

8.19 The result of the detailed assessment of effects for each component are contained in the assessment table below (Table 8.3). The table shows the nature of the effects and whether they are likely to be permanent or temporary. This is based on the description of the component (Table 8.1), the assessment assumptions and rationale set out above, and the future baseline tables in Section 5. A commentary is provided below that explains how the components affect the environment. As explained in the methodology section above, a five point scale shows how beneficial or adverse the impacts are likely to be as below:

Effects:

Large Beneficial	**++**	**Temporary**	T
Slight Beneficial	**+**	**Permanent**	P
Neutral/ Uncertain	**0**		
Slight Adverse	**-**		
Large Adverse	**- -**		

Table 8.3: Effects of the North Staffordshire LTP Components

North Staffordshire LTP Components	1. Public Transport				2. Park and Ride				3. Cycling and Walking			
SEA Objectives	Short Term		Long Term		Short Term		Long Term		Short Term		Long Term	
1. To maintain and improve local air quality	+	P	+	P	0	T	+	P	+	P	+	P
2. To improve the quality of ground and surface waters	0	T	+	P	0	T	+	P	0	T	++	P
3. To respond to climate change through reduced greenhouse gas emissions	0	T	+	P	0	T	+	P	+	P	+	P
4. To conserve and enhance wildlife habitats and species	0	T	+	P	0	T	0	T	+	P	++	P
5. To encourage better use of land and conserve soil resources and quality	0	P	0	P	0	T	+	P	0	T	+	P
6. To conserve and enhance the natural historic environment and landscape quality	0	P	+	P	0	T	+	P	0	T	+	P
7. To protect and enhance buildings, features and areas of historic, archaeological or cultural value, and their settings	0	T	+	P	0	T	0	T	0	P	0	P
8. To reduce road traffic and congestion	+	P	++	P	0	T	++	P	+	P	++	P
9. To promote more sustainable modes of transport	++	P	++	P	+	P	++	P	+	P	+	P
10. To improve health and reduce health inequalities	0	T	+	P	0	T	+	P	+	P	++	P
11. To promote safe communities, reduce crime and the fear of crime	0	T	+	P	0	T	0	P	0	T	+	P
12. To improve access to jobs and services	+	P	++	P	0	T	+	P	+	P	+	P
13. To support regeneration of deprived areas	+	P	++	P	0	T	+	P	o	T	+	P
14. To support sustainable economic growth	+	P	++	P	0	T	+	P	o	P	+	P

1. Public Transport

Will have more beneficial effects in the longer term as people begin to alter their behaviour and change to sustainable modes. Local air quality will be improved through reduced car emissions and it is likely there will also be a reduction in greenhouse gas emissions. Air quality will also be improved through the introduction of and compliance with ever more stringent bus emissions regulations. As a result of improved air quality, in the long term, there will be a reduction in respiratory related illness in North Staffordshire.

Improved bus reliability and real-time passenger information will improve access to jobs and services and support the regeneration of deprived areas. Public transport will become more accessible to people with mobility issues and passengers with pushchairs through the introduction of more low-floor buses. Focussing improvements to public transport within the inner urban core and peripheral estates will assist people who do not have access to a car. In the longer term, this will help to support sustainable economic growth as people are encouraged to use public transport to travel to and from work.

2. Park & Ride

This scheme is likely to be implemented in the medium to long term, and the likelihood is it will be beyond the LTP2 timeframe. In the short term, Park & Ride will have very limited impacts. Preliminary work to investigate the scheme should help to promote the Park & Ride and raise awareness of the scheme. In the longer term, once the scheme is implemented, there should be an improvement in local air quality due to a reduction in car trips in locations sensitive to air quality. There will also be a reduction in greenhouse gas emissions from cars.

As the proposed Park & Ride sites are brownfield land, there should be no requirement for further land take. The Etruria Site is currently a derelict former steel plant and, once developed, will improve the townscape and aid local regeneration. Reduced congestion within the inner urban area will benefit its historic environments, for example as identified by Renew's Heritage Characterisation Studies and enable enhancement works of its streetscape. Reduced congestion in the inner urban area should also help to improve accessibility, support regeneration and sustainable economic growth. The scheme proposals are currently only an outline, so it is difficult to produce an accurate assessment of the environmental impacts. The potential impacts depend largely on the way the scheme will be implemented. An environmental impact assessment of the scheme will be undertaken when the full plans are developed.

3. Cycling and Walking

Building from the completion of the National Cycle Network in North Staffordshire, the development of new walking and cycling strategies for North Staffordshire will help to promote walking and cycling. This will improve the health of the population through increased physical fitness and reduced car emission resulting in reduced respiratory illness. In the longer term as more people begin to change modes towards walking and cycling there will be reduced congestion and the related improvements to the environment such as the visual impact of cars and reduced road kill. Increased walking and cycling will result in an improvement to local air quality and in the long term there should be reduced greenhouse gas emissions due to reduced car trips. The component will promote increased community safety as more people using the streets raised people's feelings of safety.

Walking and cycling schemes, in particular through Greening for Growth schemes, are likely to include improvement of the wider environment of cycle ways and footpaths with benefits for wildlife habitats, landscape quality and the settings of features of historic, archaeological and cultural value.

As walking and cycling are low cost modes of transport an improvement to the infrastructure and facilities for pedestrians and cyclists will help improve accessibility. These improvements will also encourage people to walk or cycle to work and support sustainable economic growth.

Table 8.3: Effects of the North Staffordshire LTP Components (continued)

North Staffordshire LTP Components	4. Integrated Spatial and Transport Planning				5. Promotion of Smarter Travel				6. Creating a better managed transport network			
SEA Objectives	Short Term		Long Term		Short Term		Long Term		Short Term		Long Term	
1. To maintain and improve local air quality	+	P	+	P	+	P	+	P	+	T	+	P
2. To improve the quality of ground and surface waters	0	P	+	P	0	P	+	P	-	P	0	T
3. To respond to climate change through reduced greenhouse gas emissions	0	T	+	P	0	T	+	P	-	T	-	P
4. To conserve and enhance wildlife habitats and species	0	T	+	P	0	T	+	P	0	T	-	P
5. To encourage better use of land and conserve soil resources and quality	+	P	++	P	0	T	0	T	+	P	+	T
6. To conserve and enhance the natural historic environment and landscape quality	-	T	+	P	0	T	+	P	0	P	0	P
7. To protect and enhance buildings, features and areas of historic, archaeological or cultural value, and their settings	0	T	+	P	0	T	0	P	0	P	0	P
8. To reduce road traffic and congestion	+	P	++	P	+	P	++	P	+	P	+	P
9. To promote more sustainable modes of transport	+	P	++	P	++	P	++	P	+	P	+	P
10. To improve health and reduce health inequalities	0	T	+	P	0	T	+	P	+	P	0	P
11. To promote safe communities, reduce crime and the fear of crime	0	T	0	T	0	P	+	P	0	P	0	P
12. To improve access to jobs and services	+	P	++	P	0	T	+	P	+	P	0	P
13. To support regeneration of deprived areas	+	P	++	P	+	P	+	P	+	P	0	P
14. To support sustainable economic growth	+	P	++	P	0	T	+	P	+	P	-	P

4. Integrated Spatial and Transport Planning

The component comprises packages aimed at reducing the need to travel and encouraging modal shift away from the car. This should help to improve local air quality and reduce greenhouse gas emissions. In the longer term, modal shift should help to reduce pollutant run-off into watercourses and enhance wildlife habitats and species. In the short term, the effects on watercourses and wildlife are unclear as modal change takes longer to occur.

In the short term, development projects might detract from landscape quality; however, in the longer term, modal change will improve the landscape and townscape quality because of the reduction in car numbers. A reduction in cars would also be beneficial within historic environments.

The central aims of this component are to reduce traffic and congestion, improve access to facilities, support regeneration initiatives and support sustainable economic growth and so the assessment shows largely beneficial impacts for a number of SEA objectives.

5. Promotion of Smarter Travel

The promotion of sustainable travel is important as it communicates to the public many of the other new schemes that have been implemented. In themselves promotional activities do not have any impacts on the environment, however, in the long term, they should lead to a reduction in the use of cars. Promotional activities are particularly compatible with the SEA objectives to reduce traffic and congestion and the promotion of sustainable modes. In the longer term by enabling people to use the transport available or find a car share partner access to jobs and services will improve, supporting regeneration and sustainable economic growth. The quality of the landscape, streetscape and the settings of historical buildings should all be enhanced through the reduction in car numbers.

6. Creating a better managed transport network

Network management intends to make the most efficient and reliable use of the existing network and maximise current highway resources. This component helps to conserve land resources by maximising the current network. The component proposes the development of green waves for buses and junction improvements on the Quality Bus Corridor Network, which provides benefits for the promotion of sustainable modes and reducing congestion. Junction improvements will also be undertaken where there are localised air quality issues. This will help to improve local air quality problems.

A better managed network has mixed impacts on the environment as it would have detrimental impacts on water quality, greenhouse gas emissions and wildlife habitats. In the short term, water quality for watercourses near the highway network may reduce as road traffic pollution continues to run off in the water. Network management does not help to tackle greenhouse gas emissions as it does not contain any measures to reduce car trips. In the same way wildlife could be adversely affected through continued levels of road kill. Gaining more efficient use of the highway is assessed as having slight beneficial effects on economic growth in the short term but slight adverse effects on long term sustainable economic growth because it is not possible to continually provide more efficient junctions to meet demand. This component would not be implemented in isolation, although it has been assessed as such. The cumulative assessment of the component shows how this component fits alongside components that promote non-car modes. An efficient, well managed network is also important for emergency service vehicles, bus reliability and cycle trips.

Table 8.3: Effects of the North Staffordshire LTP Components (continued)

North Staffordshire LTP Components	7. Managing travel demand and car parking				8. New Transport Infrastructure				9. Road Safety - softer measures			
SEA Objectives	Short Term		Long Term		Short Term		Long Term		Short Term		Long Term	
1. To maintain and improve local air quality	+	P	+	P	-	T	+	P	0	P	0	P
2. To improve the quality of ground and surface waters	0	T	+	P	-	T	+	P	0	P	0	P
3. To respond to climate change through reduced greenhouse gas emissions	+	P	+	P	0	P	+	P	0	P	0	P
4. To conserve and enhance wildlife habitats and species	0	P	+	P	-	T	+	P	0	P	0	P
5. To encourage better use of land and conserve soil resources and quality	+	P	+	P	+	T	+	P	0	P	0	P
6. To conserve and enhance the natural historic environment and landscape quality	+	P	0	P	0	P	0	P	0	P	0	P
7. To protect and enhance buildings, features and areas of historic, archaeological or cultural value, and their settings	0	T	+	P	-	T	+	P	0	P	0	P
8. To reduce road traffic and congestion	+	P	++	P	+	P	++	P	+	P	++	P
9. To promote more sustainable modes of transport	+	P	++	P	+	P	++	P	0	P	+	P
10. To improve health and reduce health inequalities	0	P	+	P	+	P	++	P	0	T	+	P
11. To promote safe communities, reduce crime and the fear of crime	0	P	0	T	+	P	+	P	+	P	++	P
12. To improve access to jobs and services	-	P	-	P	+	P	++	P	0	T	+	P
13. To support regeneration of deprived areas	0	P	0	P	+	P	+	P	0	P	+	P
14. To support sustainable economic growth	-	T	+	P	+	P	++	P	0	T	+	P

7. Managing travel demand and car parking

This component contains strong demand management measures with the central aim of reducing car trips. The elements of the component vary in the short and long term. Any implementation of congestion charging may not take effect even in the long-term assessed here (15 years ahead) so the full environmental benefits of such a scheme have not been captured by this assessment. Future LTP documents will include environmental assessments of the congestion charging element of this part of the component as it develops.

In the short term the review of car parking policy and associated car park charges is largely beneficial for the environment as it helps to lessen the appeal of the car for journeys. However, an increase in car park charges and any possible reduction in long-stay parking spaces may reduce accessibility to services for car users. Increased charges may also lead to parking in side streets and other inappropriate places to avoid charges, and have slight adverse affects on the economy, however it is likely to have benefits to long term sustainable economic growth compared with the future baseline of increasing negative impacts of traffic and congestion.

In the long term, an introduction of congestion charging would have large beneficial impacts on reducing traffic and congestion and promoting sustainable modes. There would be significant benefits to sustainable modes through improved reliability and viability of public transport. Reduced car traffic would benefit local air quality, greenhouse gas emissions, watercourses and wildlife habitats in the congestion charge area. A reliable transport network is also likely to have benefits to long term sustainable economic growth.

8. New Transport Infrastructure

To tackle traffic congestion and its negative effects some new infrastructure will be required within North Staffordshire. Providing this new infrastructure is assessed as having temporary slight adverse effects on local air quality, water quality wildlife habitats and species and the setting of local buildings features and areas of historic, archaeological or cultural value. Project or scheme level Environmental Impact Assessment where appropriate will provide more clarity on these effects. In the long term the improved transport environment and tackling congestion is assessed as being likely to have permanent slight beneficial effect to these objectives and also to reducing greenhouse gas emissions.

As the new infrastructure is likely to utilise brownfield land in order to tackle congestion, improve the transport environment for sustainable modes and support sustainable improve accessibility, supporting regeneration, and sustainable economic growth permanent beneficial effects for the related objectives in the short and long term.

9. Road Safety – softer measures

This component involves training and educating children, young and fleet drivers in road safety together with work with community safety partners. This component seeks to promote safer behaviour rather than physical measures affecting the transport environment, so largely there will be no direct effects in the short or long term to objectives 1-7. The training does, however, seek to promote sustainable modes and provides skills to be able to do so safely and is assessed as having long-term benefits in terms of accessibility, health and sustainable economic growth. This component does not create any adverse impacts.

Table 8.3: Effects of the North Staffordshire LTP Components (continued)

North Staffordshire LTP Components	10. Road Safety - physical and safety enforcement measures				11. Looking after the transport network			
SEA Objectives	Short Term		Long Term		Short Term		Long Term	
1. To maintain and improve local air quality	0	P	-	T	0	P	+	P
2. To improve the quality of ground and surface waters	0	P	0	T	0	P	+	P
3. To respond to climate change through reduced greenhouse gas emissions	0	P	0	P	0	P	0	P
4. To conserve and enhance wildlife habitats and species	0	P	0	P	0	P	+	P
5. To encourage better use of land and conserve soil resources and quality	0	P	0	P	0	P	+	P
6. To conserve and enhance the natural historic environment and landscape quality	0	T	-	P	+	P	+	P
7. To protect and enhance buildings, features and areas of historic, archaeological or cultural value, and their settings	0	T	-	P	0	P	+	P
8. To reduce road traffic and congestion	+	P	+	P	0	P	+	P
9. To promote more sustainable modes of transport	0	P	+	P	0	P	+	P
10. To improve health and reduce health inequalities	+	T	+	P	0	P	+	P
11. To promote safe communities, reduce crime and the fear of crime	+	P	+	P	0	P	+	P
12. To improve access to jobs and services	0	T	+	P	+	P	+	P
13. To support regeneration of deprived areas	0	T	+	P	+	P	+	P
14. To support sustainable economic growth	0	T	+	P	0	P	+	P

10. Road Safety - Physical and Safety Enforcement Measures

The aim of this component is to improve safety and as a result the largest benefits are to health and community safety. Depending on the implementation of individual schemes, there is the potential for physical safety measures to be detrimental to the landscape/townscape particularly near historical assets. Also traffic calming could cause temporary slight adverse effects as traffic patterns adjust. At this stage there is insufficient detail about the programme of safety measures to be sure so the potential for negative impacts has been highlighted. This can then be monitored to ensure that implementation is monitored to reduce the risk of negative effects. As the component helps to promote sustainable modes, there will be some permanent long-term benefits in terms of health, accessibility and sustainable economic growth.

11. Looking after the transport network

Structural maintenance and transport asset management provides benefits to conserving assets of the environment and preventing damaging effects. Looking after the transport network underpins the other LTP strategies and has a beneficial effect to objectives 8-14.

8.20 There are no components assessed as having large adverse effects. However, there are three components that have a small number of slight adverse effects. These components are 6. Creating a better managed transport network, 8. New Transport Infrastructure and 10. Road Safety - physical and safety enforcement measures.

8.21 The network management component alone scores poorly as it aids car travel. The component would be implemented as part of a broad LTP scheme programme and when considered with demand management policies and improved public transport it should help to promote sustainable modes by providing a good quality road network on which public transport can operate.

8.22 The adverse impacts highlighted for new transport infrastructure are generally around the period of construction. Careful management and monitoring of the construction process will help to reduce these impacts. This will be considered in the mitigation section.

8.23 Safety schemes have the potential to reduce the visual quality of the landscape or townscape particularly if they are placed in the setting of historical buildings and monuments. Careful implementation and choice of traffic calming measure for the setting should reduce any negative visual impacts.

8.24 The above three components also have scope to increase the positive effects their implementation will bring through careful thought in the design stages. The maintenance component could also increase the positive impacts that it could have on the environment again through careful planning and thought.

ASSESSMENT RESULTS OF CUMULATIVE, SYNERGISTIC AND INDIRECT EFFECTS

8.25 The detailed appraisal presented above focuses primarily on effects directly related to the components of the North Staffordshire LTP. As required by the SEA Regulations, cumulative, synergistic and indirect effects have also been recorded and analysed during the appraisal. These refer to the fact that important environmental effects often result from the accumulation (either in space or over

time) of a number of smaller effects; are the indirect result of a chain of cause-effect relationships; or may result from the interaction of several different effects.

8.26 Consideration of such effects is particularly important in assessing transport proposals, where there are a number of well-known examples (e.g. the cumulative effect of greenhouse gas emissions).

8.27 Table 8.4 below presents a summary of the cumulative, synergistic and indirect effects of the components proposed under the North Staffordshire LTP (as set out in Table 8.1). Each component has been assessed against the North Staffordshire LTP SEA objectives (see Table 8.2) and professional judgement has been used to determine the likely cumulative, synergistic and indirect effects of the North Staffordshire LTP.

Table 8.4: Cumulative, Synergistic and Indirect Effects of the North Staffordshire LTP

Components	Effect	SEA Objectives	Causes	Significance
1, 2, 3, 4, 5, 8 Accessibility Strategy	Cumulative effect on economic prosperity, sustainable economic growth and health.	**8, 10, 12, 13, 14**	Cumulative effect of overall improvements to access by all modes across North Staffordshire, supporting the integration of new development into the existing transport network to secure good connectivity between businesses their workforce and customers and population to education and healthcare services. Likely increased levels of physical activity also have health benefits.	Significant beneficial in the longer term. Effects likely to be long lasting and extending beyond North Staffordshire. Potential for shorter term effects also, but likely to be minor.
1-10 Supporting Regeneration and the Local Economy Quality of Life	Indirect effect of improved access to and the provision of essential facilities.	**10, 11, 12, 13, 14**	Cumulative effect of proposals to improve accessibility for all across North Staffordshire likely to have an indirect effect in terms of enhancing the development prospects across North Staffordshire in terms of accessing new sites and supporting more intensive development of existing centres. Investment in the area also likely to catalyse population growth, with indirect effects on the demand and ability of the area to support increased essential facilities.	Significant beneficial in the longer term. Effects likely to be long lasting and provide better inter-relationships between Staffordshire and neighbouring areas. Limited potential for shorter term effects also.
All components Tackling Congestion Better Air Quality Maintenance Strategy	Positive interaction between outcomes likely to generate positive cumulative and synergistic effects.	**1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13**	Mutually reinforcing interaction between components aimed at effecting behavioural change and the creation of the necessary conditions to support modal shift towards more sustainable modes likely to produce cumulative and synergistic effects in terms of community safety, health, environmental and landscape quality, air quality and overall GHG emissions.	Significant beneficial in the longer term, both environmentally and socially. Effects likely to be long lasting and extending beyond North Staffordshire. In the short term, effects likely to be limited pending delivery of schemes and other aspects of the components.

Components	Effect	SEA Objectives	Causes	Significance
5, 7, 9, 10, 11 Road Safety Maintenance Strategy	Cumulative and synergistic effects in terms of increasing road safety and indirect economic benefits	**9, 10, 11, 12, 13, 14**	Complementary and co-ordinated actions to tackle known accident blackspots across North Staffordshire, coupled with an ongoing programme of education and training should have cumulative and synergistic beneficial effects of greater value than the individual components in terms of further improving North Staffordshire's road safety record. The fostering of safe attitudes to transport also likely to have indirect and lasting benefits for economy in terms of reducing spending on health care, reducing KSIs and minimising loss of working days to poor health.	Significant beneficial well beyond North Staffordshire and the timescale of the North Staffordshire LTP.
1, 2, 4, 5, 6, 8 Tackling Congestion Supporting Regeneration and the Local Economy Quality of Life	Cumulative effect of these policies will create an enhanced status for public transport due to its choice, reliability and quality of service	**8, 9, 12, 13, 14**	The implementation of these components as part of a rounded LTP policy will help to raise the status of public transport and promote it as a real alternative to the car. The policies combined help to improve the road network and prioritise bus movements, increase public transport choice through the introduction of park and ride. Integration with spatial planning will ensure that new trips will be of a distance to enable the use of public transport and all of these measures will be promoted through Travelwise initiatives.	Significant beneficial in the longer term, both environmentally and socially. Effects likely to be long lasting and extending beyond North Staffordshire.

8.28 As can be seen in Table 8.4, the North Staffordshire LTP performs well in terms of the cumulative, synergistic and indirect effects on: the promotion of more sustainable modes of transport; the reduction of road traffic and congestion; the improvement of health and reduction of health inequalities; the promotion of safe communities, reduction of crime and fear of crime and the improvement of access to jobs and services. Benefits are also seen in the majority of the SEA objectives, with secondary effects arising from improving air quality and reducing GHG emissions for health, biodiversity and the environmental quality of North Staffordshire. This positive interrelationship is very much in line with the objectives and approach of the North Staffordshire LTP and the spatial planning context of the LTP.

8.29 The consideration of cumulative, synergistic and indirect effects does, however, highlight one distinct weaknesses of the North Staffordshire LTP in its current form, namely – the adverse implications of construction in the redevelopment and regeneration works that the North Staffordshire LTP aims to support. In turn the regeneration works are likely to have largely positive effects on the North Staffordshire LTP SEA objectives. The Environmental effects of the regeneration of North Staffordshire will be assessed and monitored through the combined Sustainability Appraisal and SEA of the City Council and District Councils' Local Development Documents of their Local Development Frameworks – as set out in their Local Development Schemes.

RECOMMENDATIONS

8.30 Whilst the North Staffordshire LTP components produce large beneficial effects across many of the SEA objectives, as mentioned above no large beneficial effects were found for the following SEA objectives from any of the components individually:

1. To maintain and improve local air quality
3. To respond to climate change through reduced greenhouse gas emissions;
6. To conserve and enhance the natural historic environment and landscape quality
7. To protect and enhance buildings, features and areas of historic, archaeological or cultural value, and their settings

8.31 The assessment of cumulative, synergistic and indirect effects has indicated that large beneficial effects to these objectives are likely to be addressed more fully as the effects of plan implementation become apparent over time. However, the Provisional North Staffordshire LTP should be revisited with a view to more fully addressing the issues represented by SEA objectives 1, 3, 6 and 7 – whilst certain elements of the objectives are apparent within the overall strategic approach of the North Staffordshire LTP, it may be appropriate to further develop the document to incorporate specific schemes, measures and/or proposals to meet the objectives so that large rather than just slight beneficial effects can be achieved. Such measures may include setting of specific targets for certain elements (e.g. % of maintenance materials that must be recycled) or adoption of standard policy approaches (e.g. specific requirements to consult conservation officers throughout the development of schemes from initial design through to implementation).

8.32 In addition to developing the North Staffordshire LTP to target specific weaknesses highlighted through the appraisal process, there is also a need to consider more general measures to enhance the effectiveness of the LTP content in sustainability terms. Such measures fall into two broad categories – the first concerns the need to ensure that standard mitigation measures, as set out in national guidance/standards, are implemented as a matter of course (see Section 9). The second concerns measures that are 'bespoke' in nature, seeking to target specific concerns or policy priorities in the North Staffordshire area. Such measures could include the following:

- the promotion of alternative fuels, particularly in public transport vehicles;
- the incorporation of micro-energy generation in transport proposals;
- the development of design guidelines for the use of sustainable/recycled materials in transport proposals; and
- adoption of specific design guidelines for transport infrastructure and signage in historically sensitive environments.

9. MITIGATION

INTRODUCTION

9.1 The term mitigation includes any approach that is aimed at preventing, reducing or offsetting significant adverse environmental effects that have been identified through the SEA. Applying one or more of these approaches together is likely to be considered in mitigating any significant adverse effects predicted as a result of implementing the North Staffordshire LTP. It is also important to consider measures aimed at enhancing positive environmental effects. All such measures are generally referred to as mitigation measures.

9.2 However, the emphasis should be in the first instance on avoiding adverse effects. Only once alternative options or approaches to avoiding an effect have been examined should mitigation then examine ways of reducing the scale/importance of the effect.

MITIGATION MEASURES

9.3 Mitigation can take a wide range of forms, including:

- Changes to the North Staffordshire LTP strategy alternatives, including bringing forward realistic new alternatives to address specific elements that cause adverse effects, or adding, reducing the level or deleting alternatives;
- Refining options in order to improve the likelihood of positive effects and to minimise adverse effects;
- Technical measures (such as setting guidelines) to be applied when implementing schemes;
- Identifying issues to be addressed in environmental impact assessments for certain schemes or types of schemes;
- Proposals for influencing other plans and programmes; and
- Contingency arrangements for dealing with possible adverse effects.

9.4 Mitigation measures for the North Staffordshire LTP components fall into two categories. The first category concerns common elements of the components (for example construction works and practices; and consideration of impact on flora and fauna), referred to as **generic mitigation measures**; and the second considers mitigation measures that are relevant to specific components, referred to as **component-specific mitigation measures**. All of the mitigation measures proposed aim to minimise adverse effects and maximise beneficial effects.

9.5 The consultation comments on the Environmental Report for consultation (see Appendix D) provide clear support for these mitigation measures. The two categories of mitigation (generic and component specific) have been incorporated into Chapter 12 of the LTP: Implementation – Making it Happen.

Generic Mitigation Measures

A. scheme level Environmental Impact Assessments, where applicable;

B. use of ecological specialists at all stages of design and implementation in order to develop measures to protect biodiversity within designated and important habitats and integrate biodiversity into final scheme designs;

C. compensation and creation of additional habitats where negative effects are unavoidable;

D. the use of Sustainable Urban Drainage Systems (SUDS) and stormwater treatment to minimise the adverse effect on surface and groundwater quality, together with the consideration of de-culverting watercourses wherever possible;

E. consideration of groundwater protection zones during planning and construction phases;

F. the incorporation of micro-energy generation (i.e. substitution of conventional power sources with energy from renewable sources) in transport proposals;

G. the development of design guidelines for the use of sustainable/recycled materials in transport proposals;

H. use of specific design guidelines for transport infrastructure and signage in historically sensitive environments, for example the Streets for All: West Midlands guide and consideration of the findings of the Renew AMI Heritage Characterisation Studies.

I. the formulation and implementation of specific minimum requirements/standards for sustainable transport infrastructure in relation to all new development;

J. measures to minimise the negative effect on landscape character, which could include the use of visual screening/planting, ensuring schemes do not create unnecessary streetscape clutter (for example by following the Streets for All: West Midlands Guide), and the integration of schemes within the surrounding landscape;

K. implementation of standard mitigation during construction to limit noise, vibration and dust pollution. Waste generated and disposed of during the course of schemes should be disposed of at authorised facilities only and waste exemptions may need to be registered with the Environment Agency.

Component Specific Mitigation Measures

L. **Components 1, 2, 3, and 4 –** the creation of a set of 'designing out crime' principles for transport infrastructure such as bus stops, transport interchanges and walking and cycling routes.

M. **Components 1, 2, 3, 8, 11 –** additional lighting should be designed to minimise light spill incorporating downward facing beams.

N. **Components 1, 2, 3, 4, 8, and 12 –** measures to ensure that new schemes requiring additional land take are located on previously developed land, where this is practicable.

O. **Components 2, 4, 8, and 11 –** measures to ensure that infrastructure development incorporates facilities/road space to support use of new routes by non-car modes.

P. **Components 4, 8, 10 and 11 –** measures to minimise noise pollution in sensitive areas including low noise surfacing, reducing vehicle speeds and noise attenuation barriers.

Q. **Components 1 and 2, Public Transport and Park & Ride –** promotion of alternative fuels within public transport vehicle fleets through the establishment of policies regarding proportion of vehicles that should run on non/low-polluting fuels.

R. **Component 11, Looking after the transport network –** consider the recommendations of the National Salt Spreading Research Group (NSSRG) that SCC has contributed to, for example use of new variants of pre-wetted techniques and use of agricultural by-products to reduce sodium chloride in precautionary salting techniques.

S. **Component 11, Looking after the transport network –** establishment of percentage-based targets for the use of recycled materials in the maintenance of the road network

An example of how measures H and J have been used in the existing Stoke-on-Trent LTP was reported in the 2003 Annual Progress Report:

Station Road Puffin Crossing

A crossing has been provided outside Stoke-on-Trent railway station in Winton Square (a conservation area). The crossing provides safer crossing facilities for passengers accessing the station from the nearby bus stops, car park and university buildings.

It was recognised that the introduction of the poles, lights, road markings and control box necessary for a pelican crossing would have a detrimental aesthetic effect upon the Winton Square Conservation Area. In order to minimise the impact of the pelican crossing the pelican poles were painted black and no sighting boards provided to the signal heads. A black compact controller box has been installed which has a footprint of one third of the controller normally used in the City. Furthermore, the length of zigzags either side of the crossing have been reduced.

In addition Stoke-on-Trent City Council provided photographs of the Burslem highway improvements that were carried out using regeneration funding that have been included as good practice in the Streets for All: West Midlands guide to managing streets and public space.

10. MONITORING

INTRODUCTION

10.1 The SEA Directive states that *'member states shall monitor the significant environmental effects of the implementation of plans and programmes….in order, inter alia, to identify at an early stage unforeseen adverse effects, and be able to undertake appropriate remedial action'* (Article 10.1).

10.2 The Environmental Report should provide information on a *'description of the measures envisaged concerning monitoring'* (Annex I (i)) (Stage E).

10.3 SEA monitoring involves measuring indicators that will enable the establishment of a causal link between the implementation of the plan and the likely significant effect (positive or negative) being monitored.

MONITORING PROGRAMME

10.4 Table 10.1 presents the monitoring programme for the North Staffordshire LTP SEA Objectives. It is considered that monitoring of individual schemes or proposals will be addressed at a project level hence the monitoring programme concentrates on the overall strategic effects of the North Staffordshire LTP on each objective, rather than that of specific schemes or proposals. In addition, the programme does not address the location where such monitoring would take place as this aspect will need to be analysed in the further development of the monitoring programme. The current source of monitoring data and frequency of monitoring (if currently collected); the suggested frequency of review or analysis of monitoring data and the Agency responsible for undertaking the monitoring are outlined.

10.5 Some indicators have evolved from those proposed in the SEA Framework of the Scoping Report, and in some cases new indicators have been proposed to relate specifically to the predicted significant effects of the plan.

10.6 The comments on the Environmental Report for consultation were supportive of the monitoring approach being put forward with some detailed comments regarding further work to establish indicators relating to landscape and townscape (see Appendix D). The monitoring programme will evolve over the plan period based on the identification of additional data sources, as in many cases information will be provided by outside bodies. For example we plan to use guidance given from the Countryside Agency LAR Division to develop more detailed indicators to monitor LTP effects on landscape and townscape.

10.7 The guidance suggests that SEA monitoring and reporting activities can be integrated into the regular planning cycle. As part of the progress reporting process, Stoke-on-Trent City Council and Staffordshire County Council will be required to prepare progress reports on the implementation of the North Staffordshire Local Transport Plan. It is anticipated therefore that the SEA monitoring programme will be incorporated into this process.

Table 10.1: Proposed Monitoring Programme for the SEA Objectives

SEA Objective to be monitored	Indicator(s) to be used	Current source of monitoring data and frequency of monitoring	Suggested frequency of review/analysis of monitoring data/mitigation	Responsibility for undertaking monitoring
1. To maintain and improve local air quality	Levels of main pollutants for which National Air Quality Targets exist	S-o-T CC and District Councils, continuously	Annual	S-o-T CC and District Councils reporting to SCC
	AQMA indicators	S-o-T CC and District Councils, continuously	Annual	S-o-T CC and District Councils reporting to SCC
2. To improve the quality of ground and surface waters	Percentage of water courses classified as good or fair biological quality	Environment Agency	Every 5 years	Environment Agency
	Percentage of water courses classified as good or fair chemical quality	Environment Agency	Annual	Environment Agency
3. To respond to climate change through reduced greenhouse gas (GHG) emissions	change in traffic levels	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
	emissions from road transport (CO_2 equivalent tonnes)	DfT, annually	Annual	DfT
4. To conserve and enhance wildlife habitats and species	Impact of transport schemes on population of protected species and BAP priority species	Not currently monitored	Annual	S-o-T CC and SCC
	Impact of transport schemes on designated wildlife sites (SACs, SSSIs, RIGGS, LNRs, SBIs etc.) and BAP priority habitats	Not currently monitored	Annual	S-o-T CC and SCC
	Change in areas and populations of biodiversity importance	S-o-T CC, SCC, District Councils, English Nature and the Staffordshire Wildlife Trust, less than annually	Annual	S-o-T CC, SCC, District Councils, English Nature and the Staffordshire Wildlife Trust

SEA Objective to be monitored	Indicator(s) to be used	Current source of monitoring data and frequency of monitoring	Suggested frequency of review/analysis of monitoring data/mitigation	Responsibility for undertaking monitoring
5. To encourage better use of land and conserve soil resources and quality	Area of Grade 1, 2 and 3 (best and most versatile) agricultural land permanently lost as a result of transport schemes	Not currently monitored	Annual	S-o-T CC and SCC
	Area of vacant and derelict land	S-o-T CC SCC, annually	Annual	S-o-T CC and SCC
6. To conserve and enhance the natural historic environment and landscape quality	Number of schemes that include green linkages	Not currently monitored	Scheme by scheme, with an annual figure	S-o-T CC and SCC
	Potteries and Churnet Valley Character Area [CA64] Overall Assessment	Countryside Quality Counts, less than annually	Annual	Countryside Quality Counts
6. To conserve and enhance the natural historic environment and landscape quality **AND** 7. To protect buildings and sites of archaeological, cultural and historic value and their settings	BVPI 219a: Total number of conservation areas	New BVPI indicator for 2005/06	Annual	S-o-T CC and SCC
	BVPI 219b: Percentage of conservation areas with an upto date character appraisal.	New BVPI indicator for 2005/06	Annual	S-o-T CC and SCC
	BVPI 219c: Percentage of conservation areas with published management proposals	New BVPI indicator for 2005/06	Annual	S-o-T CC and SCC
	Landscape and Townscape Character	*Develop further detailed indicators in consultation with the Countryside Agency and as Landscape Character Assessments are completed.*		Countryside Agency, S-o-T CC and SCC
7. To protect buildings and sites of archaeological, cultural and historic value and their settings	Number of listed buildings and proportion classified as 'at risk'	English Heritage, less than annually	Annual	English Heritage/ S-o-T CC and SCC
	Number of scheduled and non-scheduled sites of historically interest affected by transport schemes	Not currently monitored	Annual	S-o-T CC and SCC

SEA Objective to be monitored	Indicator(s) to be used	Current source of monitoring data and frequency of monitoring	Suggested frequency of review/analysis of monitoring data/mitigation	Responsibility for undertaking monitoring
8. To reduce road traffic and congestion	Change in area wide road traffic mileage	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
	Changes in peak period traffic flows to urban centres	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
	Amount of network experiencing regular peak hour congestion	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
9. To promote more sustainable modes of transport	BVPI 102: thousands of bus passenger journeys per annum in the authority	S-o-T CC and SCC, annually	Annual	Bus Operators reporting to S-o-T CC and SCC
	BVPI 104: Percentage of bus users satisfied with local bus services	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
	Bus punctuality	New indicator for 2005/6	Annual	S-o-T CC and SCC
	Peak period bus modal share to City Centre	S-o-T CC, annually	Annual	S-o-T CC
	Mode share of journeys to school	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
	Mode share of journeys to work	Not currently monitored	Annual	S-o-T CC and SCC
9. To promote more sustainable modes of transport **AND** 10. To promote health and reduce health inequalities	Annualised index of cycle trips	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
10. To promote health and reduce health inequalities	Percentage of Pupils covered by School Travel Plan	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC

SEA Objective to be monitored	Indicator(s) to be used	Current source of monitoring data and frequency of monitoring	Suggested frequency of review/analysis of monitoring data/mitigation	Responsibility for undertaking monitoring
	Standard mortality rates for coronary disease	Local Health Authority, annually	Annual	Local Health Authority
11. To promote safe communities, reduce crime and the fear of crime	Percentage of pedestrian crossings with facilities for the disabled	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
	Number of incidents involving criminal damage on buses	Police, annually	Annual	Bus operators and Police, reporting to SoT CC and SCC
	Percentage of residents who feel 'very safe' or 'fairly safe' outside in North Staffordshire after dark	S-o-T CC and SCC, less than annually	Annual	S-o-T CC and SCC
	Percentage of street lighting columns lit at any one time	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
	BVPI 128 The number of vehicle crimes per year, per 1,000 population.	S-o-T CC and SCC, annually	Annual	Police reporting to S-o-T CC and SCC
	BVPI 99(x): No. of killed and seriously injured in road traffic accidents	S-o-T CC and SCC, annually	Annual	Police reporting to S-o-T CC and SCC
	BVPI 99(y): No. of children killed and seriously injured in road traffic accidents	S-o-T CC and SCC, annually	Annual	Police reporting to S-o-T CC and SCC
	BVPI 99(z): No. of people slightly injured in road traffic collisions	S-o-T CC and SCC, annually	Annual	Police reporting to S-o-T CC and SCC
12. To improve access to jobs and services	Level of up to date timetable information	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
	Access to bus stops – percentage of population within 400m of a bus stop with	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC

SEA Objective to be monitored	Indicator(s) to be used	Current source of monitoring data and frequency of monitoring	Suggested frequency of review/analysis of monitoring data/mitigation	Responsibility for undertaking monitoring
	a minimum service provision of 30 minutes			
	IMD – accessibility domain of Super Output Areas	Central Government, less than annually	Less than annually	Central Government
	Proportion of workforce covered by workplace travel plans	S-o-T CC and not currently monitored by SCC	Annual	S-o-T CC and SCC
	Number of school travel plans and percentage of pupils covered	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
	BV 165: Percentage of pedestrian crossings with faculties for disabled people	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
	BVPI 178: Percentage of public rights of way that are easy to use	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
13. To support regeneration of deprived areas	IMD and rank of Super Output Areas	Central Government, less than annually	Less than annually	Central Government
	Accessibility indicator: access to employment areas	New indicator for 2005/6	Annual	S-o-T CC and SCC
	Proportion of employment and housing land developed annually	S-o-T CC and SCC, continuously	Annual	S-o-T CC and SCC
14. To support sustainable economic growth	Number of jobs created through inward investment	S-o-T CC and SCC, annually	Annual	S-o-T CC and SCC
	IMD employment and income domains – rank of Super Output Areas	Central Government, less than annually	Less than annual	Central Government

11. CONCLUSION

11.1 The North Staffordshire LTP has been the subject of strategic environmental assessment and significant environmental effects have been identified.

11.2 Overall, the assessment indicated that the approach of the North Staffordshire LTP is likely to have large beneficial effects for the environmental objectives of promoting more sustainable modes of transport; improving access to jobs and services; reducing road traffic and congestion; improving health and reducing health inequalities; supporting the regeneration of deprived areas; and supporting sustainable economic growth. Furthermore the cumulative, synergistic and indirect effects of implementation of the LTP are likely to augment the impact of the proposals in terms of improving local air quality; reducing greenhouse gas emissions; supporting economic prosperity; improving access to essential facilities; promoting sustainable modes of transport; enhancing community safety; and encouraging development and regeneration. No significant negative environmental effects were highlighted by the assessment. However, the indirect effect of the North Staffordshire LTP proposals in facilitating development was assessed as possibly giving rise to short term environmental disbenefits associated with ongoing large-scale construction projects as part of the regeneration of North Staffordshire.

11.3 Most negative effects identified can be minimised to a satisfactory degree through Environmental Impact Assessment, through the mitigation measures identified and possibly additional measures where appropriate. The findings of this assessment indicate that the environmental performance of the Provisional North Staffordshire LTP could be further improved by taking account of the recommendations included in this report.

11.4 The processes of developing the Provisional Local Transport Plan into the final and conducting the Strategic Environmental Assessment have been closely linked. Environmental considerations are one of the many determining factors for the strategies that are included in the Local Transport Plan. The Strategic Environmental Assessment process has helped to focus our thoughts more clearly on the wide range of possible environmental impacts of the Local Transport Plan and areas where the LTP can enhance the environment. The Strategic Environmental Assessment process has aided the development of the approaches to fulfil the transport priorities of supporting regeneration, improving accessibility, tackling congestion, improving air quality, improving travel safety, improving quality of life and looking after the transport network. The iterative nature of the process gave us an early indication of the environmental impacts of each of the alternatives that helped, along with other considerations, to determine and finalise our approach for the North Staffordshire Local Transport Plan.

11.5 The detailed comments through the consultation on the SEA have been used to clarify and strengthen the strategies set out in the Provisional LTP, and so develop the chapters that make up the full LTP. In response to the SEA the Full LTP contains greater emphasis and clarity on local air quality, responding to climate change through reduced greenhouse gas emissions, conservation and enhancement of the natural historic environment, landscape quality together with buildings, features and areas of historic, archaeological or cultural value, and their settings. Comments were supportive of the recommended mitigation measures in the Environmental Report for Consultation and have been incorporated into Chapter 12 ‘Implementation – Making IT Happen’ of the North Staffordshire LTP.

Table 11.1 - Remaining Stages of the SEA

Stage E – Monitoring implementation of the plan or programme
• Developing aims and methods for monitoring the environmental performance of the North Staffordshire LTP to determine whether its effects are as predicted • Identifying and responding to adverse effects and developing appropriate responses

11.6 Table 11.1 shows that in line with DfT's SEA guidance the remaining stage of the SEA of the North Staffordshire LTP is to monitor the implementation. Consultation on the Environmental Report was supportive of the monitoring programme put forward. SEA guidance suggests that monitoring and reporting activities can be integrated into the regular planning cycle. As part of the Local Transport Plan process, Stoke-on-Trent City Council and Staffordshire County Council will be required to prepare progress reports on the implementation of the North Staffordshire Local Transport Plan. It is anticipated therefore that the SEA monitoring programme as set out in Section 10 will be incorporated into this process.

APPENDIX A – Environmental Baseline Data Tables

The SEA covers the North Staffordshire Conurbation. As far as possible data relates to this area but in many cases data is available only by authority area and not for the North Staffordshire LTP area, this is specified alongside the data.

For some topic areas the ideal data is not available so a proxy is used as a best substitute. It is acknowledged that for many of the indicators shown in the tables, changes to transport would be only one of many variables to affect the achievement of these targets.

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Table A.10: Baseline Data, Indicators and Trends for Material Assets

Table A.11: Baseline Data, Indicators and Trends for Cultural Heritage and Landscape

Table A.1: Baseline Data, Indicators and Issues for Biodiversity

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issues identified	Associated SEA Topics	Source
No. & area of designated sites	• 4 SSSIs covering 0.6% (117ha.) of North Staffordshire • There are no SAC sites or Ramsar sites in the North Staffordshire area • 1 NNR exists in North Staffordshire, managed by English Nature at Hulme Quarry • 6 LNRs: Hartshill Park, Berryhill Fields, Whitfield Valley, Bagnall Road Woods, Holden Lane Pools and Westport Lake. • Sites of Biological Importance (SBIs) contain most of the best remaining areas of semi-natural habitat. There are 48 Grade 1 SBIs either wholly or partially within the area, covering a total of 909 hectares (4% of the total land area). In addition there are designated Biodiversity Alert Sites (BAS), which were formerly Grade 2 SBIs.	Target – A LNR provision of 1ha per thousand population. (Government endorsed English Nature standards for accessible natural greenspace)	Development proposals are required to protect BAP species and habitats, many of which are contained within the designated areas. LAs may identify further potential LNR sites.	Biodiversity Flora and Fauna Landscape Cultural Heritage	SBAP/Staffordshire Ecological Records (www.staffs-ecology.org.uk) English Nature
Area of land in SSSIs Classified in an 'Unfavourable' condition	English Nature assess that 28.15 ha of SSSI land in Stoke-on-Trent is in a favourable condition out of a total area of 33 ha (83%)	Bring into a favourable condition by 2010 95% of all SSSIs (DEFRA PSA target)	Condition improving - but further SSSI land needs to improve in condition by 2010 to meet target.	Biodiversity Flora and Fauna Landscape Cultural Heritage	English Nature
Number, size and quality of Non –statutory Sites of Biological Importance SBIs and RIGs	In a re-survey of Grade 1 SBIs in Staffordshire over the period 1979 -2000 21% were found to have declined to Grade 2 status & 9 % had been destroyed with large losses of semi-improved neutral grassland/ woodland.		Neglect/ inappropriate management by owners. Encourage active favourable management including by use of conditions/ planning obligations Ensure effective protection from development via LDF/ LTP.	Biodiversity Flora and Fauna Landscape Cultural Heritage	English Nature

Table A.2: Baseline Data, Indicators and Trends for Population

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA Topics	Source
Age Structure	Population at Census 2001 for the North Staffordshire area was: 360,802 (175,579 male and 185,223 female) 24.8% - 0-19 20.5% - 20-34 38.1% - 35-65 16.5% - 65+	England: 25.1% - 0-19 20.4% - 20-34 36.2% - 35-ret 18.3% - ret+	The demographic profile of the North Staffordshire highlights an above average proportion of people of older working age (35 to retirement) – 38.1% in Staffordshire compared to 36.2% at the national level; and lower than average proportion of people in the retired age range – 15.6% in North Staffordshire, compared to 18.3% at the national level.	Population Human Health	ONS – Census 2001
Burglary offences per 1000 households	Stoke on Trent: 2003/04: 22.95 2004/05: 15.92 Staffordshire County Council: 2003/04: 14.29 2004/05: 8.95	National Average: 2003/04: 14.88 2004/05: 11.72	Need to maintain the downward trend	Population	Staffordshire Police Best Value Performance Plan 2005/06
Vehicle crime	Stoke on Trent: 2003/04: 19.30 per 1000 population 2004/05: 15.91 per 1000 population Staffordshire County Council: 2003/04: 13.16 per 1000 population	England: 17.0 per 1000 population	Need to maintain the downward trend	Population	Staffordshire Police Best Value Performance Plan 2005/06
Violent Crimes	Stoke on Trent: 36.4 per 1000 population Staffordshire: 21.0 per 1000 population		Need to maintain the downward trend	Population	Staffordshire Police Best Value Performance Plan 2005/06
Deprivation	Index of Multiple Deprivation 2004 There are 238 Super Output Areas in the North Staffordshire LTP area. 93 (39.1%) are in the 20% most deprived SOAs nationally	Stoke-on-Trent is ranked the 18th most deprived out of 354 districts nationally Staffordshire County Council: Ranked 104 out of 149 County Areas in England (where rank 1 is the most deprived)	Stoke-on-Trent is one of the most deprived authorities in England. The urban parts of Newcastle-under-Lyme covered by the Joint Transport Plan also suffer from concentrated deprivation. As well as the overall Index of Multiple Deprivation, these areas also experience concentrated levels of deprivation, particularly by the domains of Health deprivation and disability and Education, Skills and Training. These are two areas in which significant improvements need to be made to improve the socio-economic environment of North Staffordshire.	Population Landscape Human Health	ODPM – IMD Statistics (2004)

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA Topics	Source
Unemployment	Claimant Count SCC part of North Staffs area: 3.4% July 2005 (based on wards in area) Stoke on Trent: 2.9%	West Midlands – 4.0% GB – 3.5%		Population	NOMIS: monthly claimant counts
Economic Activity	2001 Census, percentage of the working age population who are Economically Active Stoke on Trent: 61.2% Newcastle under Lyme: 65.2%		Need to increase the proportion of the working age population who are economically active.	Population	2001 Census of Population
Percentage change in VAT registered businesses	SCC: 1.4% increase from 2002-2003 Stoke on Trent: 0.65% increase from 2002 - 2003	England- 1% 2002-2003		Population	Small Business Service

Table A.3: Baseline Data, Indicators and Trends for Transport

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA topics	Source
Traffic Congestion	Percentage of the North Staffs network that has at least a slight problem, (ratio of flow to road capacity is between 81% to 90%): Trunk Road Network: 25.8% Strategic Highway Network: 13.2% Percentage of network junctions exhibiting some delays (an average vehicular delay of at least 30 second or more): Trunk Roads: 17.3% Strategic Highway Network: 13.6%	GB statistics for cars and taxis: 1995 – 351 billion vehicle kms 2000 – 377 billion vehicle kms 2003 – 393 billion vehicle kms Nationally traffic has increased by 19% since 1990.	The A500 is already suffering from capacity issues at peak times and new development will add pressure to busy routes – there is a need to ensure public transport, cycling and walking opportunities are increased and encouraged whilst private modes of transport need to be disincentivised DfT (TEMPRO) forecasts a 27% growth in traffic between 2001 and 2011. This raises interrelated issues in respect of safety, health and greenhouse gas emissions.	ALL	North Staffordshire Transport Model developed by NSITS, maintained by S-o-T CC for North Staffordshire quantified data. DfT for GB statistics
Bus Passengers	2001: 8.50% of the working age population travel to work by bus in the North Staffs area. 2002: Transport Modal Choice Private transport: 95.3% Public Transport: 4.7%	England: 7.51% travel to work by bus.		ALL	2001 Census of Population NSITS
Rail Passengers	0.41% of the working population travel to work by rail in the North Staffs area. Passenger demand on the West Coast Mainline from Kidsgrove to Stoke from October 1999 to October 2000 was around 400-450 passengers per day.	England 4.23% travel to work by rail, 2001 Census GB statistics for rail passenger journeys: 1995 – 761 million 2000 – 957 million 2003 – 1014 million	Rail infrastructure will need to be developed in accordance with the overall spatial strategy and promoted to ensure it becomes an attractive and viable alternative to travel by the private car, especially for commuting trips.	ALL	2001 Census of Population NSITS
Percentage of bus users satisfied with local bus services	Stoke on Trent: 48% 2003/04 SCC area: 47% 2003/04			ALL	BVPI 104
Satisfaction with the provision of public transport information	Percentage of residents satisfied with the provision of public transport information: Stoke on Trent: 45% 2003/04 SCC area: 37% 2003/04			ALL	

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA topics	Source
Percentage of people using their car for journeys to work	70.38% of the working population travel to work by car or motorcycle as a driver or passenger in the North Staffs area, 2001 Census	England: 54.9% drive and 6.11% are passengers in cars.		ALL	Census 2001
BVPI 99(x) Number of deaths and serious injuries (all ages)	North Staffordshire area 1994-1998 average: 174 per year 2002-2004 average: 131 per year	National Casualty severity ratio of 12%	Anticipated growth in traffic could result in an increase in road accidents. Accidents are often caused by a combination of a number of different factors, not all of which are in the control of the Highways Authority.	Population Human Health	Staffordshire Police BVPP 2005/2006 Draft LTP2 SCC
BVPI 99(y) Number of children killed and seriously injured	North Staffordshire area 1994-1998 average: 35 per year 2002-2004 average: 26 per year	National child severity ratio of 13%. Child pedestrian casualties as a percentage of all pedestrian casualties - 40%.		Population Human Health	Staffordshire Police BVPP 2005/2006 Draft LTP2 SCC
BVPI 99(z) Number of people slightly injured in road traffic collisions	North Staffordshire area 1994-98 average: 1,901 per year 2004: 1,733			Population Human Health	Staffordshire Police BVPP 2005/2006 Draft LTP2 SCC
Access to Services	Percentage of the conurbation's households that experience serious accessibility problems to the following destinations, using modes other than a car: Education Facilities: 22.2% Healthcare Facilities: 6.7% Hospital Beds: 47.9% Basic Food/ Household Goods: 23.2% Employment Places: 4.7% Social Contact: 6.9%		Need for accessibility strategy in LTP	ALL	NSITS
Access to a Town Centre	Percentage of the conurbation's population within the non car accessibility catchment of 30 minutes for the following Hanley: 55.1% Newcastle: 31.9% 20 minutes for the following Kidsgrove: 1.4% Tunstall: 6.7% Burslem: 4.6% Stoke: 11.5% Longton: 8.0%		Need for accessibility strategy in LTP	ALL	NSITS

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA topics	Source
Estimated traffic flow for all vehicle types	Million vehicle kilometres in 2003 SCC: 4,790 Stoke on Trent: 1,390			ALL	SCC
Cycling and Walking	10.85% of the working population travel to work on foot in the North Staffs area. 1.52% of the working population travel to work by cycle in the North Staffs area.	England: 9.99% travel to work on foot England: 2.83% travel to work by cycle	There may be physical reasons for a shift away from walking and cycling – barriers to movement of this type need to be identified and addressed. In particular, there is a need to provide safe alternatives to the private car.	Transport Population Human Health Landscape Climatic Factors Air	2001 Census of Population
% of households with a car	North Staffs area • 47768 (31.3%) households with no car • 69036 (45.2%) households with 1 car • 36036 (23.6%) households with 2+ cars	England and Wales average statistics: • 26.8% - no access to a car or van • 43.8% – access to one car or van • 29.4% – access to 2+ car(s) or van(s)	Car ownership is below national average. In order to encourage a shift away from use of the private car, there is a need to develop effective public transport to serve both rural and urban communities.	Transport Air Population Material Assets Landscape	2001 Census of Population

Table A.4: Baseline Data, Indicators and Trends for Human Health

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA topics	Source
Mortality	2001-2003 Direct Standardised Mortality Rates for: All cancers: Stoke-on-Trent: 217.57 Newcastle under Lyme: 189.90 All circulatory diseases: Stoke-on-Trent: 290.20 Newcastle under Lyme: 251.25 Coronary heart disease: Stoke-on-Trent: 91.44 Newcastle under Lyme: 72.95	West Midlands (2001-2003): All cancers: 186.67 All circulatory diseases: 256.51 Coronary heart disease: 67.21	For some causes of death the North Staffordshire area has a higher death rate than the West Midlands area.	Human Health Population	Staffordshire Quality of Life Report
General health considered 'not good'	North Staffs area: 43623 (12.1%) in 2001	England and Wales average: 9.03%	North Staffordshire has an above average proportion of the population having not good health	Human Health Population	ONS – Census 2001
People with limiting long term illness	North Staffs area: 82677 (22.9%) in 2001	England and Wales average: 17.9% 2001	Limiting long term illness precludes economic activity. Therefore, there is a need to address limiting long term illness in order to seek to return people to work, thus relieving pressure on resources.	Human Health Population	ONS – Census 2001

Table A.5: Baseline Data, Indicators and Trends for Flora and Fauna

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA topics	Source
Populations of priority species	28 species are identified in the Staffordshire BAP. A number are important at the international level under the EU Habitats Directive, the Bonn Convention and/or the Berne Convention, as follows: The Noctule Bat; The Pipistrelle Bat; The Great Crested Newt; The Natterjack Toad; and Floating Water Plantain.		Land associated with the highway network can support a wide range of important habitats and species – road verges and adjoining hedges are frequently home to uncommon plants and animals. Development proposals are required to protect BAP species and habitats, many of which are contained within the designated areas.	Flora and Fauna Biodiversity Air Landscape Climatic Factors	UKBAP/West Midlands BAP/ Staffordshire BAP
Priority Habitats	15 habitats are named in the Staffordshire BAP as priority habitats, some of which are also designated as either SSSI or SBI. 10 of these habitats are within the North Staffordshire area Together the area of designated habitat covers less than 3% of North Staffordshire. Some of these habitats are of European or International importance e.g. heathland		Land associated with the highway network can support a wide range of important habitats and species – road verges and adjoining hedges are frequently home to uncommon plants and animals. Development proposals are required to protect BAP species and habitats, many of which are contained within the designated areas.	Flora and Fauna Biodiversity Air Landscape Climatic Factors	UKBAP/West Midlands BAP/ Staffordshire BAP

Table A.6: Baseline Data, Indicators and Trends for Soil

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA topics	Source
Household waste management	Domestic waste disposal 2003/04: Staffordshire County Council • 12.0% recycled • 8.4% composted • 21.1% used to recover energy • 58.5% landfilled Stoke on Trent • 11.05% recycled • 4.33% composted • 63.65% used to recover energy • 21.01% landfilled	England average 2003/04: • 13.2% recycled • 3.9% composted • 10.5% used to recover energy • 71.9% landfilled	Waste needs to minimised at source	Soil Biodiversity Flora and Fauna Air Climatic Factors Landscape Material Assets Water Human Health	Stoke on Trent Council SCC
Use of recycled maintenance materials	SCC: 2004/05: 49,000 tonnes of recycled maintenance materials were used by Highways Maintenance. This figure represents the amount of recycled material used by one of the two term contractors. Arrangements are now in place to record all tonnages of recycled materials associated with both term contractors			Material Assets Soil	SCC
Minerals	There are 10 permitted mineral sites in North Staffordshire.			Soil, Human Health, Biodiversity, Flora and Fauna, Air, Water ,Climatic Factors, Landscape Material Assets,	Adopted UDP

Table A.7: Baseline Data, Indicators and Trends for Water

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA topics	Source
Water quality – biological and chemical	In 2000: Biological quality was good or fair in: • 84% of river and canal length in SCC • 3.2% of river and canal length in Stoke-on-Trent Chemical quality was good or fair in: • 95% of river and canal length in SCC • 24.5% of river and canal length in Stoke-on-Trent	The EA uses chemical, biological and nutrient monitoring data to classify 6725km of rivers and canals in the Midlands Region. In 2003: • biological river quality achieving good or fair quality grades (A-D) was achieved by 92.3% of rivers and canals– a drop from 2000's 93.7%. • chemical river quality achieving good or fair quality grades (A to D) was 92.5% (a decrease from 93.7% in 2000. In England, 2000 statistics were: • 94% biological river quality good or fair; • 95% chemical river quality good or fair.	Development should not contribute to increased pollution of watercourses – SUDS and similar measures should be encouraged, together with watercourse de-culverting and channel enhancements wherever possible	Water Soil Human Health Biodiversity Flora and Fauna Landscape	Environment Agency

Table A.8: Baseline Data, Indicators and Trends for Air

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA topics	Source
UK national air quality targets	North Staffs has 2 Air Quality Management Areas (AQMA) with air quality action plans produced; Cliffe Vale (NO_2) and Burnham Street, Fenton (PM_{10}). During the second round of the review and assessment process, a further seven areas have been identified where the nitrogen dioxide annual mean objective is expected to be exceeded by the target date of December 2005. These breaches are almost entirely caused by traffic emissions. The areas affected are:- • Cobridge traffic lights • Burslem Town Centre • Bucknall New Road • Bucknall Bridge • Joiners Square • Victoria Place • Meir Centre It is likely that future monitoring of similar locations across the City will reveal more instances of excessive Nitrogen Dioxide levels. Action is now required to pursue improvements in those areas affected by poor air quality. A city wide Air Quality Management declaration is proposed to acknowledge the impact of transport on air quality in these seven areas and others which are likely to result from on-going monitoring. Newcastle-under-Lyme Borough Council submitted a Progress Report in May 2005, and this was accepted by DEFRA. However, within the report concerns have been raised about particular sites within the borough regarding the levels of nitrogen dioxide. Although progression to a detailed assessment (declaration of an air quality management area) has not been necessary, there are geographical areas whereby further monitoring and investigation will be required due to potential future exceedences of the Air Quality Objectives. Baseline data from NSITS is included in Appendix B	24,000 people per annum die prematurely as a result of the effects of air pollution.	Air quality will become even more of an issue in North Staffordshire following the declaration of more AQMAs. The Local Transport Plan will have an important role to play. The declaration and action planning processes have been considered by the Council's Air Quality Management Strategy Group, which comprises practitioners from Consumer Protection, Planning, Housing, Transport, Highways and Legal Services from within the City Council plus representatives from RENEW, Staffordshire County Council, Newcastle-under-Lyme Borough Council, the Highways and Environment Agencies. The city wide AQMA addresses the strategic considerations above and enables the Action Plan to both address the general transport management issues detailed in the Local Transport Plan (LTP) and the more focused needs of the exceedance areas.	Air Human Health Climatic Factors Biodiversity Flora and Fauna	2005, Provisional North Staffordshire Local Transport Plan Air Quality Strategy

Table A.9: Baseline Data, Indicators and Trends for Climatic Factors

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA topics	Source
CO_2 emissions	NSITS estimated CO_2 emissions from transport in North Staffordshire in 2002 to be 24600 tonnes		Transport in North Staffordshire is a key contributor to CO_2 emissions.	Climatic Factors	NSITS
Renewable Energy	Waste used to recover energy, 2003/04 Stoke on Trent: 63.65% SCC: 21.10%	10.5% is the English average for use of waste to recover energy	There is a need to increase production and use of renewable energy to conserve resources – some upland areas are considered to offer potential for wind turbines. Staffordshire should anticipate and facilitate the installation of a minimum of 40 MW wind generating capacity, equating to 13 or 14 3MW turbines, by 2010.	Climatic Factors Air Material Assets Landscape	Joint Staffordshire And Stoke- On- Trent Structure Plan 1996-2011

Table A.10: Baseline Data, Indicators and Trends for Material Assets

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA topics	Source
Percentage of principal roads in need of repair: BVPI 96	Stoke on Trent: 2003/04: 34.3% 2004/05: 39.05%	National Average 2003/04: 9.8%	Staffordshire's LTP2 will address the maintenance issues for the Staffordshire County Council part of North Staffordshire	Material Assets	Provisional North Staffordshire LTP
Condition of surface footway: BVPI 187	Percentage of length of footway in need of repair in Stoke on Trent: 2003/04: 11.28% 2004/05: 4.70%	National Average 2003/04: 29.1%	Staffordshire's LTP2 will address the maintenance issues for the Staffordshire County Council part of North Staffordshire	Material Assets Population Human Health	Provisional North Staffordshire LTP
Percentage of an authority's footpath network that is "easy to use": BVPI 178	Stoke on Trent: 2003/04 33.2% 2004/05: 14.8%	National Average 2003/04: 68.9%	Staffordshire's LTP2 will address the maintenance issues for the Staffordshire County Council part of North Staffordshire	Material Assets Population Human Health	Provisional North Staffordshire LTP
Proportion of pedestrian crossings with facilities for the disabled	Stoke on Trent: 2003/04: 18.5% 2004/05: 28.0%	National Average 2003/04: 82.4%		Material Assets Population Human Health	Provisional North Staffordshire LTP
Housing* BVPI 106 *Percentage of new homes built on previously developed land	Stoke on Trent: 2003/04 78.0% 2004.05 91.0% SCC: 2003/04 62%			Material Assets Population Biodiversity Flora and Fauna Landscape Water	Joint Staffordshire and Stoke-on-Trent Structure Plan 1996-2011
Proportion of Housing stock unfit	SCC: 2002 – just under 12,000 dwellings (44 per 1000) Stoke on Trent: 38%	2002 – 59.6 per 1000	Development pressure means that the best use must be made of existing housing stock	Material Assets Landscape Human Health	HIP returns cited in Staffordshire Quality of Life Report
Overcrowding	North Staffs: 4.7% 2001 Census	7.0% in England		Material Assets Human Health	Staffordshire Quality of Life Report

Table A.11: Baseline Data, Indicators and Trends for Cultural Heritage and Landscape

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA topics	Source
Archaeological Sites	17 Scheduled Ancient Monuments in North Staffordshire LTP area		Development should not adversely affect SAMs or their settings	Cultural Heritage Landscape	English Heritage
No. of I, II* and II Listed Buildings and proportion at risk ***Number of Properties of Special Local Interest***	In North Staffs area there are 425 Listed Buildings. These include: • The Gladstone Pottery Museum, Longton • The Wedgwood Institute, Burslem • Grade I listed Trentham Mausoleum • Stoke-on-Trent Railway Station • Longport Railway Station • Harecastle Tunnel Portals of the Trent and Mersey Canal • Canal and Roadside Mileposts There area also 5 registered parks/gardens: • Longton Park • Hanley Park • Burslem Park • Tunstall Park • Newcastle Park Staffordshire does not hold a list of Grade II buildings at risk. In Stoke-on-Trent There are 192 Listings of which 1 is Grade I and 16 II*. 34 of these were surveyed as being at risk 6 of the 17 Grade I and II* were surveyed as being at risk, including the Grade I listed Trentham Mausoleum. Stoke-on-Trent City Council has a database of 443 properties of special local interest which is currently being reviewed.	3.6% of Grade I and Grade II* Listed entries are at risk in England and Wales	Transport proposals should not adversely affect historic structures and their settings, which include numerous mile markers and historic bridges – proposals affecting such sites should be developed in consultation with the conservation specialists within the relevant environmental planning sections. Trentham Mausoleum is Stoke-on-Trent's only grade I listed building. Urgent repairs totalling in excess of £140,000 are currently being carried out funded by English Heritage and the corporate Heritage and Design Fund. Further analysis of the opportunities implications for the LTP are given in Table 6.1	Cultural Heritage Landscape	English Heritage Stoke-on-Trent Buildings at Risk Survey 2002/03 Stoke-on-Trent Database of Properties of Special Local Interest
No. of Conservation Areas	North Staffs area 40 Conservation Areas			Landscape Cultural Heritage	Staffordshire Historic Environment Record (Environmental Planning Unit)

Indicator	Quantified data (North Staffordshire)	Comparators (Quantified data for West Midlands and England and Wales)	Issue identified	Associated SEA topics	Source
Potteries and Churnet Valley Character Area [CA64] Overall Assessment	**1990 to 1998:** Limited or small changes consistent with character. Changes are mostly small and consistent with character, although development may offset this to some extent. **1998 to 2003:** Data for the period currently being analysed by the Countryside Quality Counts project.	**England 1990 to 1998:** 42% of landscapes (65/156) were either stable or showed changes in elements that were consistent with existing character area descriptions 26% of landscapes (41/156) the changes were marked and inconsistent with descriptions 32% of landscapes (50/156) the changes were inconsistent but of less significance for overall character 156 of the 159 Character Areas of England had sufficient data available for them to be assessed	Transport schemes should be sensitive to the landscape profile: **Underlying features** Strongly dissected hills and small plateaux, rising up to the Pennines and cut by major river valleys. Strong contrast between remote uplands, urban areas, sheltered wooded valleys and hillside pastures. Prominent Millstone Grit and Coal Measures ridges. **Cultural elements** Sprawling industrial towns of the Potteries forming a major conurbation. Rural settlement pattern of sheltered villages on low ground with hamlets, scattered farmsteads and cottages elsewhere. Brick and sandstone older buildings with tile and slate roofs. **Changing elements** Extensive former industrial and extractive sites, many now reclaimed, intermixed with settlements and open land. Open moorland and rough grazing on higher ground.	Landscape Cultural Heritage	Countryside Quality Counts

APPENDIX B NSITS/North Staffordshire Transport Model Future Baseline Data

Source: North Staffordshire Transport Model

Vehicle Based Travel Characteristics by Mode, Location and Road Type in North Staffordshire, 2021 Evening peak Hour Period. Figures for 2002 shown in parenthesis

	Vehicular Travel Distance (KM x 1000s)	**Vehicular Travel Time (Hours)**	**Average Travel Speed (KM/h)**
Private Car and Goods Vehicle			
a) By Location			
i) Travel in Urban Areas	488.4 (421.1)	17985 (13575)	27.2 (31.0)
ii) Travel in Rural Areas (including M6 Motorway)	574.4 (438.8)	7290 (5340)	78.8 (82.2)
b) By Road Type			
i) Motorway	390.4 (285.7)	4155 (2960)	93.9 (96.5)
ii) Core Trunk Road (A50/A500)	180.1 (150.7)	4445 (3085)	40.5 (48.9)
iii) Other Roads	492.3 (423.5)	16675 (12870)	29.5 (32.9)
c) Overall	1062.8 (859.9)	25275 (18915)	42.1 (45.5)
Urban Bus	3.1 (3.1)	175 (150)	17.9 (20.4)
Rail (Based only on Trips starting or finishing in the study area)	0.5 (0.5)	7 (7)	70.9 (70.9)
All Modes	1066.4 (863.5)	25457 (19072)	41.9 (45.3)

2002 and 2021 Link Based Efficiency Problems (2002 figures in parenthesis)

Network Type (Distance)	Percentage of Network Subject to Problems			
	No Problem	Slight Problem	Moderate Problem	Serious Problem
Study Area Network (691km)	88.1 (93.7)	5.4 (4.7)	4.2 (1.3)	2.4 (0.3)
Strategic Network (322km)	76.3 (86.8)	9.6 (9.6)	8.9 (2.9)	5.2 (0.7)
Trunk Road Network (63km)	62.4 (74.2)	8.6 (21.7)	15.7 (4.1)	13.3 (0.0)

2002 and 2021 Junction Based Efficiency Problems (2002 figures in parenthesis)

Junction Type (No. of Junctions)	Percentage of Junctions Subject to Problems			
	No Problem	Slight Problem	Moderate Problem	Serious Problem
All Junctions (327)	85.5 (89.9)	9.1 (8.3)	2.7 (1.2)	2.7 (0.6)
All Junctions on Strategic Network (220)	81.4 (86.4)	11.7 (10.9)	3.0 (1.8)	3.9 (0.9)
All Junctions on Trunk Road (23)	67.9 (82.6)	10.7 (4.3)	3.6 (4.3)	17.9 (8.7)

ACCESSIBILITY

Source: NSITS

Percentage of Conurbation's Households that have Accessibility Problems				
	No Problem	Slight Problem	Moderate Problem	Serious Problem
Education Facilities				
2002 Baseline	35.8%	15.3%	26.8%	22.2%
2021 Without Strategy	20.8%	17.6%	29.7%	31.9%
2021 Transport Strategy Implemented	70.3%	15.6%	9.3%	4.7%
Healthcare Facilities				
2002 Baseline	61.8%	17.4%	14.0%	6.7%
2021 Without Strategy	58.8%	20.0%	14.5%	6.7%
2021 Transport Strategy Implemented	75.6%	12.3%	8.9%	3.2%
Hospital Beds				
2002 Baseline	48.6%	2.2%	1.3%	47.9%
2021 Without Strategy	43.5%	1.5%	1.4%	53.6%
2021 Transport Strategy Implemented	71.4%	0.6%	7.7%	20.4%
Basic Food/ Household Goods				
2002 Baseline	60.5%	11.9%	16.2%	11.4%
2021 Without Strategy	46.2%	9.3%	19.6%	24.9%
2021 Transport Strategy Implemented	60.5%	11.9%	16.2%	11.4%
Employment Places				
2002 Baseline	65.2%	22.0%	8.0%	4.7%
2021 Without Strategy	54.0%	22.8%	14.8%	8.3%
2021 Transport Strategy Implemented	94.1%	4.7%	1.1%	0.0%
Social Contact				
2002 Baseline	48.4%	26.6%	18.1%	6.9%
2021 Without Strategy	36.0%	28.8%	27.2%	8.0%
2021 Transport Strategy Implemented	87.9%	7.3%	4.8%	0.0%

AIR QUALITY

Source: NSITS

PM10: Percentage of the network subjected to traffic related local air quality problems			
	No problem	Slight Problem	Serious Problem
2002 Baseline	44.5%	55.5%	0%
2021 Without Strategy	80.1%	19.9%	0%
2021 Transport Strategy Implemented	82.9%	17.1%	0%

NO_2: Percentage of the network subjected to traffic related local air quality problems			
	No problem	Slight Problem	Serious Problem
2002 Baseline	89.4%	10.6%	0%
2021 Without Strategy	100%	0%	0%
2021 Transport Strategy Implemented	100%	0%	0%

NSITS confirmed that high traffic levels in many parts of the conurbation have given rise to localised air quality problems with the levels of nitrogen dioxide (NO_2) and particulates (PM_{10}) being of concern. These are shown in Figures A.1 and A.2 below and are based on outputs from the 2002 base-year transport model.

Figure A.1: Local air quality problems, NO_2 (2002)

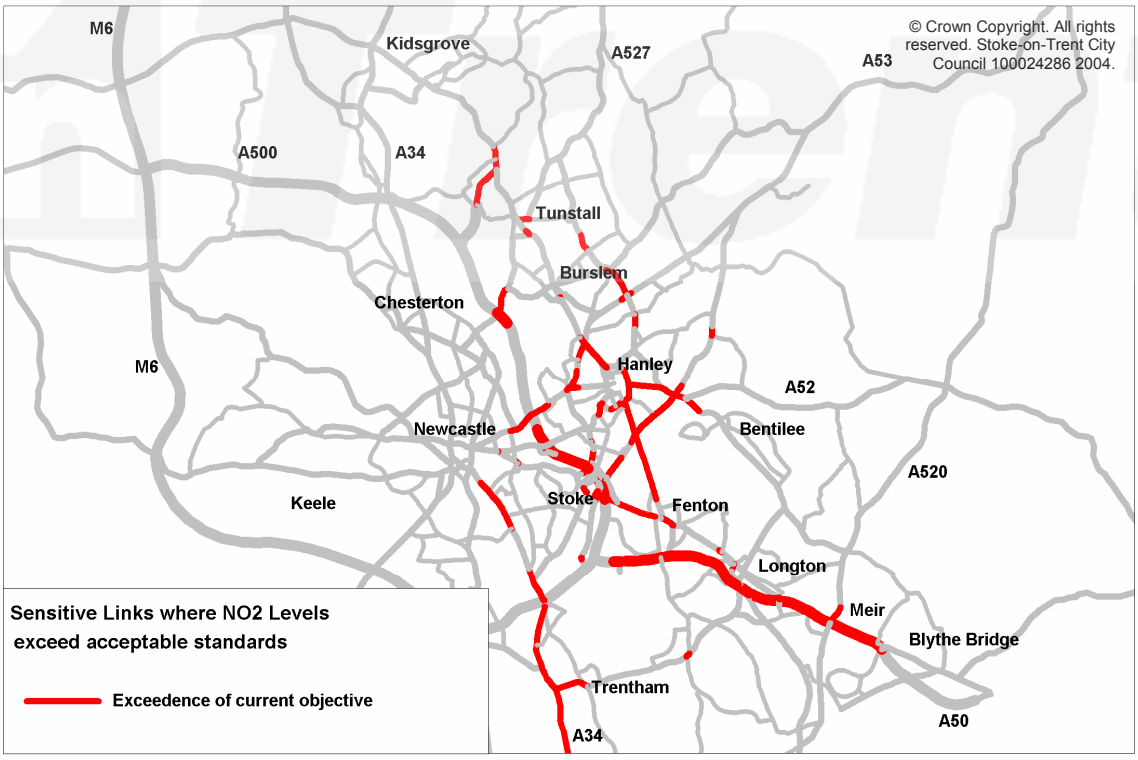
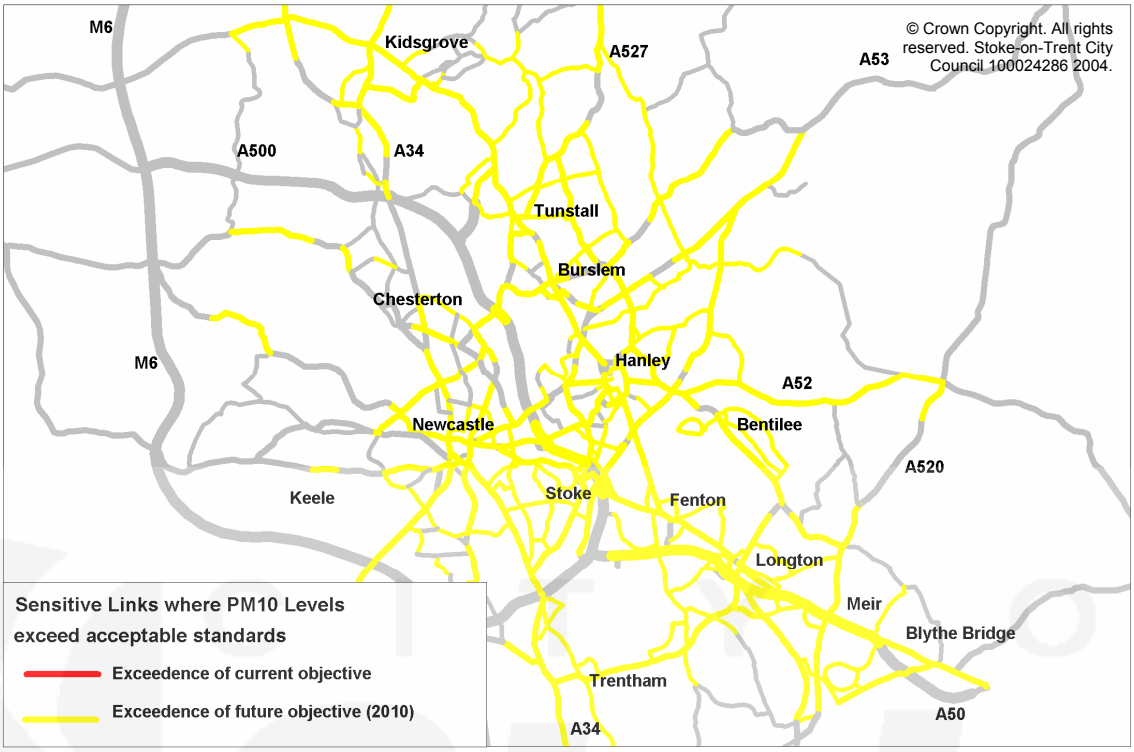


Figure A.2: Local air quality problems, PM_{10} (2002)



CLIMATIC FACTORS

Source: NSITS

Carbon dioxide emissions (tonnes) for the North Staffordshire area	
2002 Baseline	24600
2021 Without Strategy	25210
2021 Transport Strategy Implemented	22735

APPENDIX C Schedule of responses to Scoping Report Consultation Comments

Scoping Report Consultation Comment	Response
The Highways Agency would support these themes (Draft SEA themes, Table 2.2) in line with its interests and Business Plan objectives in sustainable transport.	This table is included as Table 3.3 in the Environmental Report.
The Scoping Report addresses both current and future air quality issues that would be of interest and concern to the Highways Agency.	Comment welcomed
Noise pollution is briefly discussed in relation to traffic. To alleviate noise pollution the SEA recommends using noise reduction materials where appropriate in highway maintenance works, managing the movement of lorries so encourage them to use only suitable routes and close working with Environmental Health Officers in monitoring noise levels across North Staffordshire. No further detail is provided so potentially lorries could be encouraged or directed to use trunk and motorway networks. Therefore the report does not fully address the issues that would be of interest and concern to the Highways Agency.	The actions included in the Scoping Report to alleviate noise pollution are in the overview of the North Staffordshire LTP section. More detail is given in the Provisional LTP in the Quality of Life Issues on page 117, and is closely linked to the Tackling Congestion Strategy. *These strategies have been finalised in the full LTP in Chapter 7: Tackling congestion and Chapter 10: Improving Quality of Life.*
It is considered that although the SEA is comprehensive, the Highways Agency will need to assess in more detail the environmental effects of the noise alleviation measures and once designated, access the detail on the seven AQMAs.	An update on the AQMA process is given in Tables A8 and 6.1 of the Environmental Report. *Chapter 8 of the North Staffordshire LTP 'Improving Air Quality' sets out how the LTP plans to tackle traffic related air quality problems.*
The Highways Agency supports the recognised need to ensure that public transport opportunities are increased as an alternative to the private car. It should also be highlighted within this section that cycling and walking should be encouraged as alternatives to the private car.	Encouraging cycling and walking have been added to this section in the Environmental Report in line with the strategies in the LTP.
The Scoping Report sets out the draft SEA framework which includes 14 draft SEA objectives. The following objectives would be supported by the Highways Agency: 1. Objective 8 "To reduce road traffic and congestion." 2. Objective 9 "To promote more sustainable modes of transport."	These Objectives have been used in the Environmental Report to structure the environmental baseline information, likely evolution of the baseline, analysis of alternatives and the assessment of the significant environmental effects of the North Staffordshire LTP.
In terms of the indicators for objective 9 the Highways Agency would wish to see indicators relating to Workplace Travel Plans and Residential Travel Plans in addition to School Travel Plans.	Table 10.1 in the Environmental Report sets out the proposed preliminary monitoring programme for the North Staffordshire LTP SEA Objectives which includes indicators relating to travel plans.
To summarise the above the Highways Agency supports the majority of the content of the Scoping Report. However the Highways Agency would like to see information and targets for cycling and walking included within the baseline information.	The baseline information (Appendix A of the Environmental Report) includes data for the percentage of people that travel to work on foot and by bicycle (2001 Census). Table 10.1 in the Environmental Report sets out the proposed preliminary monitoring programme for the North Staffordshire LTP SEA Objectives which includes indicators relating to cycling and walking.

Scoping Report Consultation Comment	Response
Should promote environmental enhancement rather than merely maintain it. For example: promotion of watercourse de-culverting; channel enhancements, SuDS etc.	This advice has been incorporated into the Environmental Report in Table 6.1 - Key Environmental / Sustainability Problems and Opportunities and the Generic Mitigation Measures in Section 9.
Within Table 2.2 the Environment Agency should be included as a National source for the maintenance and enhancement of the quality of the environment and also to reduce the amount of waste produced and ensure the prudent and efficient use of natural resources.	We have added to the table (Table 3.2 in the Environmental Report) accordingly.
Waste generated and disposed of during the course of the schemes should be disposed of at authorised facilities only and waste exemptions may need to be registered with the Agency.	This advice has been incorporated into the Generic Mitigation Measures in Section 9 of the Environmental Report.
Liaison with the Agency and associated bodies to formulate targets for the improvement of ground and surface waters.	We will liaise with the Environment Agency and associated bodies on monitoring of the SEA in relation to ground and surface waters.
We would like to recommend that you ensure river corridors (and all watercourses) are protected and that there is no detriment to the natural floodplains. We would advise that de-culverting of watercourses is carried out wherever possible.	This advice has been incorporated into the Generic Mitigation Measures in Section 9 of the Environmental Report.
We recommend that consideration is given to incorporating an indicator in Table 1.1 which relates to biodiversity protection and management as an important aspect of environmental performance.	Table 10.1 in the Environmental Report sets out the monitoring programme for the North Staffordshire LTP SEA Objectives which includes indicators relating to biodiversity protection and management.
I would question the statement at paragraph 1.17 which simply aligns 'cultural heritage' to humans and the built environment. As outlined below, the recommended broad definition of the historic environment encompasses both built and natural aspects. And in view of this the term 'historic environment' is generally preferred to 'built heritage'.	We have used the term 'historic environment' in place of 'built heritage' to encompass all aspects of the historic environment.
In line with the Regional Spatial Strategy and other national guidance, the term 'environment' should also be broadly interpreted in terms of its natural, built and historic assets. For example, Table 4.1 uses 'environmental assets' to cover only biodiversity aspects.	We have amended the title in the table to more specifically describe biodiversity aspects.
Following on from the above points, throughout the appraisal process the historic environment (cultural heritage) should be broadly defined - all designated historic assets should be considered together with potential impacts on non-designated features of local historic or architectural interest and value since these can make an important contribution to creating a sense of place and local identity.	We have ensured that non-designated features of the historic environment are considered.

Scoping Report Consultation Comment	Response
English Heritage strongly advises that the conservation and archaeological staff of the County Council and the local districts are closely involved throughout the preparation of the LTP and its assessments.	We will continue to work closely with the environment team, archaeological and conservation staff throughout the SEA and LTP process.
As part of the review of national documents, it would be useful to include the Government's statement on the historic environment '*The Historic Environment: A Force for our Future*' (DCMS, 2001) – the last four bullet points in paragraph 9 providing a useful summary of the headline aims.	We have amended the review of documents accordingly.
Under regional plans update the reference to Heritage Counts as the 2005 edition (published in November 2005 and available via: www.heritagecounts.org.uk). The Regional Cultural Strategy should also be included.	We have updated our reference.
Stoke on Trent and Staffordshire County Plans and Programmes – in addition to the landscape SPG a historic landscape characterisation project for the County was completed recently and will serve to complement the landscape SPG by providing further information on the historic dimension of landscape character.	We will include information from the historic landscape characterisation in our baseline information when it becomes available. We have consulted the environmental team and unfortunately the data analysis process is not quite complete.
Intensive and Extensive surveys of historical significance are currently underway within the North Staffordshire Housing Market Renewal Area. The first report for the Middleport, Burslem and Hanley South AMIs is completed, and will help to inform the implementation of the Renew Prospectus.	The Heritage Characterisation Studies will help to inform the development of any schemes within Renew's Burslem and City Centre South Areas of Major Intervention and have been added to the Plan and Programmes Table.
With regard to the cultural heritage theme, I feel that the sources identified need to be better linked to the plans and programmes listed in the previous section (and our comments above). Under the 'local' column a cross-reference to the historical significance surveys referred to above would be useful.	We have included this cross referencing.
For the draft theme on rural areas, whilst I welcome the recognition given to heritage as a component element of the quality of rural areas, I suggest that the Countryside Agency should also be referred to in the national/international source column.	The reference has been added.
Finally, the theme of 'maintaining and enhancing the quality of the environment' appears to be interpreted mainly in terms of pollution factors which are covered elsewhere. It either needs to be interpreted more broadly i.e. natural, built and historic environment or given a clearer, more specific focus.	We agree that this theme overlaps others and that the sources are included in other themes. We have amended this theme and more clearly defined others to include historic environment, landscape and townscape elements.
As underlined above, in establishing the baseline the historic environment should be broadly interpreted encompassing: • all designated historic assets; • non designated features of local historic interest; • the character of the wider landscape and	We have ensured that we apply this broad definition of the historic environment.

Scoping Report Consultation Comment	Response
townscape; and • the potential for as yet unrecorded archaeological interest.	
Figure 3.2 – although titled 'key environmental constraints' the figure only refers to BAP habitats and the title should be amended.	We have corrected the plan title.
Whilst the inclusion of a 'historic sensitivity' map (Figure 3.3) is welcomed as an aid to help inform the strategic level assessment, the basis for the derivation of the map is unclear and further supporting information should be included as part of the Scoping Report. It would also be helpful to clarify how it is intended to use the map and at what level.	We have explained more clearly how we created the map. We have used the point data that forms the sensitivity map in assessing the potential impact of North Staffordshire LTP policies with the help of the environment staff.
The relationship between the mapping process and the County's historic landscape characterisation (HLC) project should also be explained. More generally, the County's HLC should be taken into account as a baseline source relevant to both cultural heritage and landscape.	Staffordshire's Historic Landscape Characterisation is just coming to an end and the data will be available to be incorporated into our SEA monitoring. We have made this clear in the Environmental Report.
The ongoing survey work for within the HMRA on historic significance should be included as a baseline source.	The Heritage Characterisation Studies will help to inform the development of any schemes within the AMIs and have been added to the Plan and Programmes Table.
Ensure consider Scheduled Monuments *and* other nationally important archaeological remains - since not all are scheduled.	We have added the consideration of other nationally important archaeological remains in Table 6.1.
Clarify that all grades of listed buildings have been included i.e. Grade I, II*, II – all are of national importance and Grade II buildings form the vast majority of the listed resource.	All grades of listed buildings are included and this has been clarified in the Environmental Report.
Table A.11: Generally the table should better reflect the data presented in Table 4.1. References to buildings at risk should be clarified – in the national register there are regional and county breakdowns of listings including for Staffordshire. Currently the national register does not cover Grade II buildings – although the County, City Council, Newcastle-under-Lyme Borough Council may have they own at risk registers covering Grade II and local list buildings.	Staffordshire does not hold a list of Grade II buildings at risk. We have improved the data presentation relating to Buildings at Risk in Table A.11 of the Environment Report.
Table A.11: Conservation areas fall under 'cultural heritage' and landscape themes – the latter associated with their townscape role. If included under landscape rather than cultural heritage, the topic should be clearly cross-referenced as part of the appendix summary.	We have combined the table for the cultural heritage and landscape themes due to the overlap of relevance of the data.
Apart from the broad contextual information on their number/extent, it should be noted that as from 1 April this year a new BVPI on conservation areas has been introduced (Reference: ODPM BVPI 2005/6 Report) and hence should ideally be reflected in the baseline.	We will take note of the BVPIs for the % of conservation areas with an upto date character appraisal and % with published management proposals in the monitoring of the SEA when the baseline has been set.
The analysis given in table 4.1 for heritage of problems and opportunities provides a good basis for the assessment and addresses many of the considerations set out in the	We have amended Appendix A of the Environmental Report accordingly.

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accompanying annex to this response. However, it is recommended that this information is used in the 'issue' summary column given in the appendix (tables A.11 & 12) for consistency and indeed a more comprehensive overview.	
For objective 6, the proposed scope of the objective and its accompanying indicator is unclear. The Countryside Agency's Countryside Quality Counts initiative may provide a potential indicator for monitoring change in the landscape. As highlighted previously there is also a large degree of overlap with the landscape topic in terms of safeguarding the character and quality of historic landscapes and townscapes. [For example see our comments above regarding the consideration of conservation areas].	Greater use of the Countryside Quality Counts project information has been made for the baseline information (Section 5 and Appendix A of the Environmental Report) and the overall assessment for the Potteries and Churnet Valley Character Area has been included as an indicator for the SEA monitoring programme (Table 10.1 of the Environmental Report).
Either as part of the cultural heritage topic or landscape topic we recommend that strengthened consideration is given to townscape character. As outlined in the enclosed leaflet this is the focus of English Heritage's Streets for All guidance with the aim of tackling unplanned, unsightly and cluttered streetscapes. More generally the historic dimension of landscape character must be clearly taken into account.	Greater emphasis has been placed on townscape character and the historic dimension of landscape character. The use of the Streets for All: West Midlands guide is emphasised in the mitigation section of the Environmental Report.
We welcome the overall approach of Objective 7, which accords with our previous suggestion on the County Council LTP.	The SEA Objectives have been used in the Environmental Report to structure the environmental baseline information, likely evolution of the baseline, analysis of alternatives and the assessment of the significant environmental effects of the North Staffordshire LTP.
With respect to the proposed indicators the relevance of the buildings at risk indicator to the LTP is questioned.	Staffordshire County Council and Stoke on Trent City Council are responsible for a range of listed structures throughout North Staffordshire which are currently on the 'Buildings at Risk' register. Mileposts within the verges along major roads are included within this register and the Buildings at Risk survey looks at the condition of these and other structures on an Annual basis. The proposed monitoring programme is set out in Section 10 of the Environmental Report.
The second indicator on archaeological sites could be extended to cover adverse impacts on archaeological sites/remains more broadly (i.e. including those of regional and or local interest).	The proposed monitoring programme is set out in Section 10 of the Environmental Report.
The third indicator could be amended to cover both the protection and the improved management/maintenance of buildings and places of historical significance. This would provide a useful link to the ongoing survey work within the HMRA.	The proposed monitoring programme is set out in Section 10 of the Environmental Report.

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Other possibilities for indicators include: A measure of the impact (damage) to a range of historic assets (including their settings) i.e. number, % or area of historic buildings, sites and areas affected (designated and non designated aspects);	An exercise in identifying and recording monitoring non-scheduled nationally important monuments across Staffordshire is set to commence during 2006 and a review of locally important properties is currently being undertaken. This will enable the monitoring of non-scheduled nationally important monuments and properties and the impacts upon the fabric and setting of these from North Staffordshire LTP schemes. A list of scheduled monuments is maintained by the City and County Council. Works to these statutorily protected historic assets require Scheduled Monument Consent and levels of impact through any LTP scheme can be measured through this. The City and County Council will also monitor any monument or its setting which is likely to be impacted by the schemes of the North Staffordshire LTP.
A measure relating to change in landscape / townscape character, for example the loss of historic landscape features, erosion of character and distinctiveness;	SCC are set to complete the historic landscape characterisation project in April 2006. This data set can then be used to determine levels of impact of North Staffordshire LTP schemes upon the historic landscape.
The renewal and reuse of buildings of historic or architectural interest as for example facilitated by or as part of transport schemes;	We do not currently hold detailed information on the renewal and reuse of historic buildings. However the LTP where possible supports the use and re-use of buildings of historic or architectural interest, for example Stoke-on-Trent and Longport Rail Stations.
Improvements in the management of historic and archaeological sites, features and areas;	We do not manage other historic assets which are likely to be impacted by schemes outlined in the LTP.
Facilitating greater understanding, enjoyment and access to the County's historic assets;	The City and County council are committed to the promotion of the historic environment and to facilitating greater understanding, enjoyment and access to the North Staffordshire's historic assets. The accessibility indicators could be used as a proxy to monitor the impact LTP schemes may have on this element.
Improvements in the quality of the townscape, such as through the delivery of street/public realm audits, improvement works, de-cluttering works in both urban and rural areas.	Considerations such as maintenance and de-cluttering will be considered through the Transport Asset Management Plan which is currently being developed. Regeneration led Environmental Highway Improvements support the LTP and improving the quality of North Staffordshire's townscapes.
When considering impacts on the historic environment, we strongly advise that careful consideration is given before concluding that impacts on historic sites or features are not strategically significant. This is because individual sites can have regional or national significance, perhaps through scarcity or particular associations (regional/sub regional/local).	We will receive assistance from Environmental staff to help us determine the likely impacts on historic sites and features.
The cumulative effect of relatively minor changes may also become significant – as for example the gradual intensification of development and the impact on the character	We have considering possible cumulative effects in the Environmental Report.

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and appearance of particular historic assets and their settings such as conservation areas, as well as the character of the wider landscape/townscape.	
It is recommended that a broad interpretation of mitigation measures is adopted to accord with emerging Government guidance and the SEA Directive. This should be in terms of preventing, reducing or off-setting significant effects, in addition to considering opportunities for enhancement.	A broad interpretation of mitigation is given in Section 9 the Environmental Report.
We welcome the inclusion of the LTP aim G2 (Improve overall environmental quality), and would emphasise the importance of broadly interpreting this to include the natural, built and historic environment.	We will ensure the interpretation encompasses the natural, built and historic environment.
We also welcome the consideration given to improve streetscape quality (10.5.7). In relation to the design and management of the streetscape and other infrastructure proposals/improvements, we would urge that the Councils through the LTP promotes the adoption of best practice such as advocated in the regional Streets for All guidance manual (enclosed) as endorsed by the Department of Transport.	Reference to the Streets for All guidance, that the City Council contributed to with regard the Burslem environmental highway improvements, has been included in the generic mitigation measures in Section 9 of the Environmental Report.
The potential for 'de-cluttering' reviews of street signage etc (as proposed in the provisional Worcestershire County Council Provisional LTP) could also be considered.	Street scene considerations such as maintenance and de-cluttering will be considered through the Transport Asset Management Plan.
English Heritage welcomes the production of the Transport Asset Management Plan. As indicated there are a wide range of assets including bridges and structures, road signs, street furniture – aspects of which may be of historic interest through their listing status and or scheduling as monuments or of general local historic/architectural interest. We trust that these aspects will be included in the Management Plan.	The Transport Asset Management Plan will cover the management of transport assets with historic interest.
Also with respect to the bridges we recommend that the potential historic interest of bridges and other structures should be highlighted since this should inform any maintenance work. Where appropriate, the opportunity for delivering enhancement measures to historic bridges and structures as part of any maintenance programme should be explored with the County Council and City Council historic environment officers.	We will highlight the importance of historic bridges and other structures and our role in protecting and enhancing this resource.
Can you explain why Clanway Heathland has been left out of the SEA for the LTP2 bid? I would hope both the Heathland and the Scotia Valley heritage site are both included in the final version sent to GOWM, as rare Heathland is included in your Bio-diversity Action Plan and deserves the utmost protection. Any decision to destroy such a valued land mass should be fully explained in your SEA.	4 SSSIs, 1 National Nature Reserve, 6 Local Nature Reserves and 48 Grade 1 Sites of Biological Importance have been identified. The biological sensitivity of North Staffordshire has been surveyed and mapped, as shown in Figure 5.4. The Staffordshire Biodiversity Action Plan (BAP) individually lists 28 species and 15 BAP priority habitats that are prevalent in the County. BAP habitats are shown in Figure 5.2. Analysis of strategic alternatives is set out in

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	Section 7. Table 8.1 describes the components that are proposed for implementation through the North Staffordshire LTP and are assessed by this SEA.
The conservation area Victoria Park, Tunstall will see an increase in passing traffic of around 80%(Scott Wilson traffic impact assessment) should the Tunstall Northern Bypass be built what impact will this have on the quality of this conservation area? And what have the conservation experts suggested? Why is there no mention of the impact of an increase in traffic of some 50% passing Chatterley Whitfield (Scott Wilson traffic impact assessment)?	SEA is an iterative review process that plans and programmes whose formal preparation begins after 21 July 2004, or plans and programmes whose formal preparation began before that date if they have not been adopted (or submitted to a legislative procedure leading to adoption) by 21 July 2006, must undergo as they are being developed to ensure that significant environmental effects arising are identified, assessed, mitigated and communicated to decision-makers. The Tunstall Northern Bypass is not assessed by this SEA as its development and adoption predates the North Staffordshire LTP and SEA directive. The original Environment Statement is considered to be adequate for the project. Table 8.1 of the Environmental Report describes the components that are proposed for implementation through the North Staffordshire LTP and are assessed by this SEA.
Why is there no mention of impact of Hanley-Bentilee link road on Berryhill fields?	The Hanley Bentilee Link is not assessed by this SEA as its development and adoption predates the North Staffordshire LTP and SEA directive. Table 8.1 of the Environmental Report describes the components that are proposed for implementation through the North Staffordshire LTP and are assessed by this SEA. As part of the Regional Assembly's recent advice to ministers Hanley-Bentilee Link has been given a low prioritisation for regional funding for major transport schemes. As a consequence of this advice it is unlikely that funding for the scheme will be forthcoming within the plan period.
Can you explain without a flood risk assessment having been taken out, how you can safely drain a flooded marl hole and cope with the redirection of underground streams and not risk polluting or flooding Scotia Brook, surely your information in this case must be poor? If not can I have a copy of the underground water study?	The SEA uses Environment Agency chemical, biological and nutrient monitoring data covering the LTP area as a baseline for water quality. The SEA recommends scheme level Environmental Impact Assessments where appropriate as a generic mitigation measure, that would cover this level of detail as required. Table 8.1 of the Environmental Report describes the components that are proposed for implementation through the North Staffordshire LTP and are assessed by this SEA.
Can you explain how building a bypass dissecting a greenway natural corridor, directly next to a heritage site meets direct 4 of SEA to conserve and enhance wildlife habitats?	Table 8.1 of the Environmental Report describes the components that are proposed for implementation through the North Staffordshire LTP and are assessed by this SEA.
Why are you continuing to build new build major new roads, when this only apparently from your report meet 1 of the SEA objectives out of 14? Have all options been considered?	The strategic alternatives, including to significantly increase overall road capacity, are assessed in Section 7 of the Environmental Report. Table 8.1 describes the components that are proposed for implementation through the North Staffordshire LTP and are assessed by this SEA.

APPENDIX D Schedule of responses to Environmental Report Consultation Comments

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In general LAR [Landscape, Access and Recreation (LAR) Division of the Countryside Agency] considers that the SEA is very thorough and does indeed cover LAR interests in sufficient detail. We also consider that the report takes a very clear approach to the SEA process and follows a logical methodology.	Comment welcomed
Paragraph 2.19 Quality of Life Issues - LAR is pleased that it is acknowledged that the LTP can assist with the improvement of the quality of public open spaces and contribute to the conservation and enhancement of landscape quality	Comment welcomed
3. Other Relevant Plans and Programmes - LAR commends the City and County Council in this section for the comprehensive coverage of plans and programmes which have been included. In particular we are pleased that documents relevant to LAWs interests have been referenced including, "Countryside Quality Counts ', State of the Countryside in the West Midlands 2004" and Staffordshire County Council's Supplementary Planning Guidance Planning for Landscape Change	Comment welcomed
4. SEA Objectives In this section the detailed indicator profile from "Countryside Quality Counts" (GQC) for the Potteries and Churnet Valley (CA64) has been used. Whilst LAR supports the inclusion and use of this indicator to monitor changes in countryside quality, we would also like to see additional indicators that could provide a wider measurement of landscape change. Landscape (and townscape) character is equally important as quality when assessing the potential and actual effects of LTP's because it relates to the environment that affects everyone's daily lives; changes to it are no less important than those affecting areas of highest quality. Landscape character assessment (LCA) is widely accepted as an effective tool for describing landscape types and similar methods exist for characterising townscapes. Staffordshire has an excellent LCA (and the associated Supplementary Planning Guidance Planning for Landscape Change") and this should he used as a basis for evaluating and influencing landscape change. Tranquillity is another potentially valuable indicator for landscape and environmental effects of transport schemes and there is continuing research into ways of recording tranquillity. It can be described as a "composite feature related to low levels of built development, traffic, noise and artificial lighting". Light pollution is another key issue for many protected landscapes and sensitive character areas. Transport corridors can have a major adverse influence if unsympathetic lighting solutions are adopted and it is therefore desirable to record those stretches of road that are lit and	We will use this guidance from the Countryside Agency LAR Division to develop more detailed indicators to monitor LTP effects on landscape and townscape.

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the type of overhead lighting employed. A potential SEA indicator could be, "Lengths of road with overhead lighting columns". Consideration should also be given to the use of indicators to record positive change in landscape character or quality arising from sustainable transport initiatives. For example improvement of the public enjoyment of sensitive landscapes or tranquil areas through substitution of bus services for private car access, or the introduction of car-sharing schemes. For further details on landscape indicators please see "Landscape Indicators for Strategic Environmental Assessment of LTPs - Issues to consider" which is a discussion paper prepared for the Countryside Agency (LAR Division) and is available on the Agency's website www.countryside.gov.uk	
5. Baseline Information The general range and detail of environmental information provided within the baseline information section is welcomed. LAR particular welcomes the description of the Potteries and Churnet Valley character area, which appears in Appendix A.	Comment welcomed
6. Summary of Environmental Problems and Opportunities In table 6.1 it lists the provision of environmental and streetscape improvements to encourage walking and cycling. Whilst LAR supports this aim we would also suggest that these improvements could also provide opportunities to contribute to the green infrastructure of the urban environment. In this section LAR would also like to see the inclusion of the opportunity that new' transport measures could provide to promote and enhance access to the countryside for recreational purposes.	Environmental and streetscape improvements that encourage walking and cycling was a demonstration of the overlap of the Housing Market Renewal and Local Transport Plan aims. We agree that there are also mutual benefits to improvements to the green infrastructure of the urban environment and encouraging walking and cycling. We feel that there are also mutual benefits between opportunities to green infrastructure of the urban environment and housing market renewal, and other regeneration in North Staffordshire. This is something the LTP supports directly through the Supporting Regeneration Chapter, and Improving Quality of Life Chapter. The Improving Accessibility Chapter supports enhanced access to recreation facilitates, this includes improving accessibility to and from the countryside.
8. Assessment of significant effects In table 8.1 LAR welcomes the inclusion, under the heading cycling and walking, that provisions will be taken to enhance the public right of way system.	The Rights of Way Improvement Plans are being integrated into the LTP process. Appendix F of the LTP gives further information about this process.
9. Mitigation LAR supports Generic Mitigation Measure J, which measures to minimise the negative effect on landscape character, which could include the use of visual screening, planting and the integration of schemes within the surrounding landscape.	This measure has been included in Chapter 12 of the LTP: Implementation – Making it Happen and will seek to utilise best practice guidance from agencies with environmental responsibility such as the Countryside Agency.
10. Monitoring In Table 10.1, Proposed Monitoring Programme for SEA Objectives. LAR is pleased to note that the indicators to be used include the number of schemes that include green linkages, as this will encourage the establishment of green infrastructure.	The measures decided concerning monitoring of the effects on SEA objectives are detailed in Chapter 13 of the LTP: Performance Management, this indicator is included.

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Broadly we (English Nature, North Mercia Team) welcome the Environmental Report.	Comment welcomed
However we question whether the trend data indicating a 'good condition' presented in table 5.1, 5.2 and 5.3 relating to wildlife habitats and species reflects current trends. Although the condition of SSSIs is largely positive in the City, in respect of the condition of many Biodiversity Action Plan species and habitats, farmland birds, protected species and many Sites of Biological Importance (SBIs) we judge that negative trends are likely to apply from an already low baseline situation. The attached table provides available data to support this assertion. In our estimation the condition of wildlife habitats and species should be judged as 'poor'; trend, 'declining' and sensitivity 'high'. Accordingly all possible opportunities to maintain and enhance biodiversity resources should be integrated into the plan.	We have improved the detail of information in our baseline information using the information received. We agree that the SEA baseline data and trends summary should be described as 'poor' condition, trend, 'declining' and sensitivity 'high'. In the commentary to the future (short term and long term) baseline data and trends make the consequences of other strategies dedicated to biodiversity improvements against pressures such as climate change difficult to forecast. However we agree that all possible opportunities to maintain and enhance biodiversity should be integrated into the plan. To achieve this we have included in Chapter 12 of the LTP: Implementation, the following standard mitigation measures for all LTP schemes where appropriate: **A** scheme level Environmental Impact Assessments, where applicable **B** use of ecological specialists at all stages of design and implementation in order to develop measures to protect biodiversity within designated and important habitats and integrate biodiversity into final scheme designs **C** compensation and creation of additional habitats where negative effects are unavoidable
The SEA has stated that motorised transport is a contributing factor to the housing failure and the need to improve the transport environment as part of the intervention. The Regional Spatial Strategy proposes further development in North Staffs and West Midlands conurbations as opposed to dispersing outside of these areas. This will help to minimise longer distance commuting into the conurbations and help offset traffic, congestion and air quality problems on key routes. The Highways Agency has concerns over this statement as it may have the effect of additional traffic using an already congested trunk road and motorway network, as identified in paragraph 5.26 of the document.	The LTP has been developed within the context of the Regional Spatial and Transport Strategies. Overall, the SEA indicates that the approach of the North Staffordshire LTP is likely to have large beneficial effects for the environmental objectives of promoting more sustainable modes of transport; improving access to jobs and services; reducing road traffic and congestion; improving health and reducing health inequalities; supporting the regeneration of deprived areas; and supporting sustainable economic growth.
The SEA recognises the highest increase in travel occurring on the motorway and trunk road network contributing to congestion and the reduction in travel speeds in the area. As a result, the LTP strategies would need to tackle these problems in order to improve accessibility.	Overall, the SEA indicates that the approach of the North Staffordshire LTP is likely to have large beneficial effects for the environmental objectives of promoting more sustainable modes of transport; improving access to jobs and services; reducing road traffic and congestion; improving health and reducing health inequalities; supporting the regeneration of deprived areas; and supporting sustainable economic growth.
The SEA acknowledges that high levels of motorised traffic in many parts of the conurbation have contributed to localised air quality problems with nitrogen dioxide (NO_2) and particulates being of concern. As the trunk road and motorway	Air quality is a priority for North Staffordshire as there are many places where the national air quality objectives for nitrogen dioxide (N02) and particulates (PM10) are being exceeded, mainly due to traffic emissions. This has been

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network would be heavily trafficked during peak periods, the air quality associated with these roads is of concern. However the Councils have also recognised that there are other areas that also have problems with air quality (Table A.8). The SEA identifies that the LTP will need to contain a strategy to improve air quality, incorporating Air Quality Management Areas and action plans. Stoke-on-Trent City Council has declared two AQMAs. The Cliffe Vale AQMA is of concern to the HA as the site is in close proximity to the A500(T) and cited as the casue of high nitrogen dioxide levels. A further seven sites have been added since the Scoping Report, where the annual mean nitrogen dioxide levels were expected to exceed the objectives by the target date of December 2005. The HA would like to suggest that a city wide (Stoke) AQMA should be considered in order to acknowledge and address the impact traffic congestion is having on local air quality (NO_2).	confirmed by the ongoing monitoring of air quality by the local authorities and also by the North Staffordshire Integrated Transport Study (NSITS) As a result of the first round of the Review and Assessment process, the City Council concluded that the nitrogen dioxide annual mean objective would be exceeded in the Cliffe Vale area of the City by the target date of 2005. In addition, Burnham Street (Fenton) was identified where the particulate (PM10) 24-hour mean objective would be exceeded more than 35 times a year by the target date of December 2005. Both areas were declared Air Quality Management Areas (AQMAs) and Air Quality Action Plans (AQAP) were produced for each. During the second round of the Review and Assessment process a further seven areas were identified where the nitrogen dioxide annual mean objective was expected to be exceeded by the target date of December 2005. Following approval from the Department for Environment Food and Rural Affairs (DEFRA) and Council approval it was agreed to declare a City-wide AQMA on 1 April 2006, covering the whole of Stoke-on-Trent. An AQAP will be produced for the City within 12 months which will take into account the objectives of this LTP. The AQAP will make specific reference to the seven areas where particular problems have been identified though it is recognised that many of the solutions will need to be wider in their application. Chapter 8 of the LTP: Improving Air Quality sets out the North Staffordshire LTP Air Quality Strategy. It sets out three main areas of work: • Developing our knowledge of air quality. • Implementing direct action to improve air quality. • Providing information and education on air quality.
The SEA has identified the importance of maintenance where it is acknowledged that ride quality encourages more sustainable modes of transport as well as reducing vehicle noise. It also contributes to improving safety.	Chapter 11 of the LTP: Looking after the Transport Network sets out the maintenance strategy for Stoke-on-Trent, maintenance of Staffordshire's transport assets is set out in the Staffordshire LTP.
The document recognises the need for waste to be minimised and to encourage recycling in accordance with national policy. The SEA identifies the need to minimise mineral and waste operations due to the environmental impact of transport. The HA has concerns over this matter as it may have an impact upon the trunk road and motorway network.	The SEA process has identified the need to mitigate the demand to extract and dispose of materials through the recycling of materials used in the maintenance of the road network.
The Councils acknowledge the need to identify the location and causes of accidents involving vulnerable road users and implement measures aimed at reducing them. It is this category of casualty that has more serious injuries than any	This is set out in Chapter 9 of the LTP: Improving Travel Safety.

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other. The Councils will also seek to accord with the national road safety target through the LTP, the reduction of child casualties. It is the aim of the document to work towards an effective enforcement policy in liaison with the Police and other stakeholders.	
It may be seen by the information above that environmentally there are quite a few transport related problems which will need addressing in the LTP.	Overall, the SEA indicates that the approach of the North Staffordshire LTP is likely to have large beneficial effects for the environmental objectives of promoting more sustainable modes of transport; improving access to jobs and services; reducing road traffic and congestion; improving health and reducing health inequalities; supporting the regeneration of deprived areas; and supporting sustainable economic growth.
Strategy Options, C. Better Air Quality: I suggest a ninth bullet point under this title – Reduce single occupancy car borne trips. I also suggest an additional example measure of options – Reduce the need for single occupancy car borne trips - for strategy No. 1.	This is covered by the strategy option 'Encouraging smarter travel' – car sharing is an example given in Table 7.1 of the Environmental Report. The promotion of the Staffordshire and Stoke Share-a-Lift scheme is an example measure given in Table 8.1 of the Environmental Report.
The Highways Agency endorses the policy of using transport modelling and accessibility planning techniques to inform the development of the Local Development Frameworks. The Agency also agrees that there is a need to identify measures to reduce the need to travel.	Comment welcomed
Future decision making regarding potential park and ride initiatives will be of concern to HA as it may lead to a localised increase in traffic levels on the trunk road network, and may therefore impact upon the environment. The potential for negative effects of new park and ride developments is referred to in Section 7.14 of the Environmental Report. However it is stated that any future park and ride scheme will be accompanied by an Environmental Impact Assessment (EIA) (Section 8.19), which should, in theory, identify and mitigate any environmental effects that may concern the trunk network.	This mitigation measure has been included in Chapter 12 of the LTP: Implementation – Making IT Happen and will be implemented where appropriate.